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THE
AMERICAN
JOURNAL OF INSANITY.

EDITED BY THE

MEDICAL OFFICERS OF THE NEW YORK STATE
LUNATIC ASYLUM.

VOL. XXIX.

The care of the human mind is the most noble branch of medicine.—GROTIUS.



STATE LUNATIC ASYLUM.
UTICA, NEW YORK.

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BUFFALO STATE ASYLUM FOR THE INSANE.

AMERICAN
JOURNAL OF INSANITY,
FOR JULY, 1872.

STATE PROVISION FOR THE INSANE.

BUFFALO STATE ASYLUM—ITS HISTORY AND DESCRIPTION.

In July, 1797, the New York Hospital, located in the city of New York, first received insane patients, and in 1821, the Bloomingdale Asylum, the insane department of the Hospital, was completed. This received aid from the State, and accommodated a limited number of indigent patients. In 1830, the first steps were taken which eventuated in the erection of the New York State Lunatic Asylum, at Utica. This was opened in 1843. In 1852, further accommodations were demanded, and Governor Seymour embodied in his annual message a recommendation for the erection of another State Asylum. In 1856, the superintendents of the poor presented a memorial to the Legislature, recommending, "that your honorable body will at once cause the immediate erection of *two State Lunatic Hospitals*, so located that they may accommodate the largest number of insane, *at present unprovided for.*"

A committee was appointed to report upon the condition of the insane poor then confined in the county houses, and receptacles and recommended "the estab-

lishment of two or more asylums for the insane, in addition to the existing asylums, and to be under similar management with the State Asylum," and presented a bill for the immediate location of one such asylum east, and one west of Utica. This measure failed of success at that time, but it has been the basis of the subsequent exertion and action of those interested in the welfare of the insane and of the Legislature; and at length the adoption of this plan then recommended has been secured.

In 1864, the Legislature directed further inquiry, and under its enactment Dr. S. D. Willard, as Secretary of the State Medical Society, and Surgeon-General of the State, arranged a report from materials furnished by physicians in each of the different counties, setting forth the condition of the insane then kept in the county houses. He recommended in this report to the Legislature the establishment of an institution for the care of the incurable insane. At the same session in 1865, a bill was introduced, providing for the erection of two asylums of a similar character to the State Asylum, one to be located east and one west of Utica, which was referred to a committee and reported favorably upon. This bill was subsequently modified, so as to provide for the erection of one institution entitled, the "Beck Asylum for the Chronic Insane," who are paupers, in honor of Dr. T. Romeyn Beck. While the bill was on its passage, Dr. Willard died, and the name was changed to the "Willard Asylum for the Chronic Pauper Insane." Its erection has steadily progressed, and for two years past it has been receiving patients of the class designated by law, as parts have been successively completed. This in no way obviated the necessity or abated the efforts to carry out the original design to care for *all* of the insane, and in 1867, a bill was passed organizing a second

State Asylum. This was located at Poughkeepsie, and designated the "Hudson River Hospital for the Insane." It is now open for the reception of patients, in the portion already constructed.

In further pursuance of this policy, the Legislature passed an act on the 13th of March, 1869, by which the Governor was authorized to appoint five commissioners to select a suitable site in Western New York, in the Eighth Judicial District, on which to erect an asylum for the insane. "The said commissioners shall have power to receive by gift, or to contract for the purchase of such site for the location of said asylum, subject however, to the approval of the next Legislature, to whom they shall report their action in the premises within ten days after the commencement of the session." Dr. John P. Gray, of Utica; Dr. James P. White, of Buffalo; Dr. Milan Baker, of Warsaw; Dr. Thomas D. Strong, of Westfield; and Dr. William B. Gould, of Lockport, were appointed commissioners, and formally organized at Buffalo, on the 15th of July, 1869, with Dr. Gray as chairman.

Invitations were received to visit various places within the district, to examine the locations presented. The action of the board was based upon the requisites demanded for the location of an asylum, as set forth in the propositions adopted by the "Association of Medical Superintendents of Institutions for the Insane." It was further resolved that no site should be chosen of less than two hundred acres of land; that it should be located where an abundant and reliable supply of water could at all times be obtained; and that in the examination and final determination, a site containing the greatest practical and substantial advantages should be selected. The commissioners met on the 5th of October, and between that date and the 16th, examined the

various sites presented. Propositions containing a full description of the property and specifications of the cost of building materials and supplies, addressed to the commissioners, were required to be in writing.

After a careful review of the sites offered and the advantages of each, it was unanimously determined that it would be for the interest of the State and the welfare of the insane, and to the success of the institution, to locate it in Buffalo, upon conditions proposed by the city, and substantially as follows: "That the property mentioned and referred to in the proposals received from said city, containing two hundred acres more or less, shall be gratuitously conveyed and donated by a full covenant warranty deed to the State of New York, for the purposes of said insane asylum." "That the said city will guarantee to the State of New York, a free perpetual right and privilege to use from the water works of the city, whatever water may be required for the purposes of said asylum, without any compensation therefor and will covenant on its part that such gratuitous right and privilege shall never be revoked, withdrawn or rescinded." The city also agreed to lay main pipes of size sufficient to furnish all the water required for the asylum, as soon as work should be commenced on the foundations. The propositions were accepted by the commissioners, to take effect after the passage of an act by the Legislature authorizing the city to make the purchase and conveyance. A report of these proceedings, with the recommendation of the commissioners, was made to the Legislature during the session of 1870 and their action was approved. On the 23d of April, the act to establish the asylum in the city of Buffalo was passed. This authorized the Governor to appoint by and with the consent of the Senate, ten managers for the "Buffalo State Asylum for the Insane," and

SCAJAQUADA CREEK

BUFFALO STATE ASYLUM

FOR THE INSANE

GENERAL PLAN OF THE PROPERTY.

SCAJAQUADA CREEK

FARM LANDS

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designated their respective terms of office. The law organizing and governing the State Asylum at Utica, was made applicable to this institution, and an appropriation of \$50,000 was made, subject to the provision that none of it should be expended except for plans and specifications to be on the basis of 500 patients.

The managers appointed were: John P. Gray, Utica; Asher P. Nichols, Buffalo; William B. Gould, Lockport; Lorenzo Morris, Fredonia; Augustus Frank, Warsaw; and Albert P. Lanning, William G. Fargo, George R. Yaw, James P. White, and Joseph Warren, all of Buffalo. The board met at Buffalo on the 26th of May, 1870, and formally organized by the appointment of Dr. James P. White as President; and a committee was appointed to procure plans, drawings and specifications for the proposed building. In this condensed history of provision for the insane, terminating in the establishment of the Buffalo State Asylum, we see the success of the proposition made in 1855, to erect "two State Lunatic Asylums, so located that they may accommodate the largest number of insane, at present unprovided for." This object has been steadily kept in view by the advocates of the measure, and they have by earnest and persistent effort attained a result which will promote the true interest of the insane, and do credit to the humanity and generosity of the State.

LOCATION AND PLAN OF GROUNDS.

From the first annual report, we learn that the Asylum is located upon a farm of two hundred acres of unbroken land, situated in the western part of Buffalo, some three miles from the centre of the city. The land is bounded on the north by the Scajaquada Creek, a tributary of the Niagara River; on the south by Forest

Avenue; on the east by the line of Elmwood Avenue, and on the west by the City Park. Upon Forest Avenue it has a frontage of some three thousand feet. The natural surface of the ground is undulating, and portions of it are traversed by several ravines, which cross it generally from east to west. On the south east part of the grounds is a fine grove of trees, principally oak and maple. There are also several springs, one of which has long been noted for its mineral qualities. Much of the surface is underlaid with rock, and clay of good quality is abundant. The Asylum grounds, as presented in the plan, were laid out and will be improved under the direction of Mr. Fred. Law Olmsted, the celebrated landscape architect.

The building will have a southern exposure, and front upon Forest Avenue. It will overlook the city, the Niagara River, and have a distant view of Lake Erie, and will present a fine architectural perspective from the park and its approaches. It is situated within a short distance of a depot of the New York Central Railway, and is easily reached by lines of street railroad. The beauty and natural advantages of the location, in its diversified scenery, ease of drainage, readiness of obtaining material and supplies, and of access from all directions, show the wisdom and foresight of the commissioners who selected it. The generosity of the city of Buffalo, in giving to the State such a tract of land, and in binding itself to furnish a perpetual and full supply of water free of cost, should not be overlooked and can not be too highly appreciated.

On the 25th of August, 1870, a sketch of the ground plan, devised by Dr. Gray, of the committee on plans and specifications, was unanimously adopted by the board and approved by the State officers in accordance with legislative enactment.

GENERAL PLAN
OF THE
BUFFALO STATE ASYLUM FOR THE INSANE,

Scale, —

100 ft.

REFERENCES.

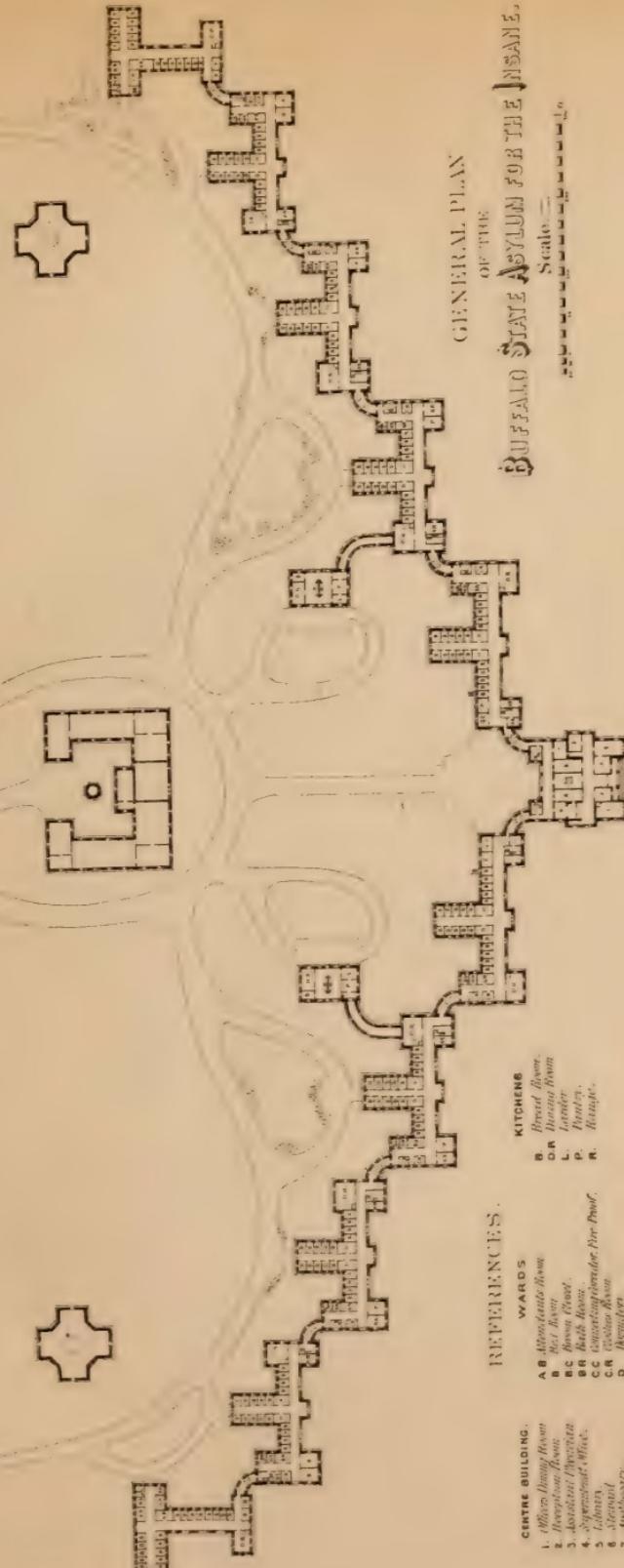
CENTRE BUILDING:

1. Office, Dining Room
2. Hospital Room
3. Hospital Office
4. Superintendent's Office
5. Library
6. Laundry
7. Medicine
8. Matrons' Office
9. Matrons' Room

Wards

- | | |
|----------------------------|-----------------------|
| A. Infants' Room | B. Breast Room |
| B. Rec. Room | C. Laundry Room |
| B.C. Room, Corr. | D. Latrine |
| B.R. Beds Room | E. Trotty, |
| C.C. Quarantine Ward Prof. | F. Fringe, |
| C.R. Children's Room | G. Kitchen |
| D. Hospital | H. Dining Room |
| D.R. Dining Room | I. General's Quarters |
| P. Kitchen | J. Hospital Room |
| W.C. Wash-Room | K. Wash-Room |
| W.R. Wash-Room | L. Latrine |

KITCHENS





Subsequently, the elevation and plan presented by H. H. Richardson, of New York City, was accepted, and he was appointed architect, and A. J. Warner, of Rochester, supervising architect.

GROUND PLAN OF THE BUILDING.

This plan, a lithographic plate of which we present, provides for a central or administration building, with wards for patients extending from either side, and for other necessary buildings, as kitchen, bakery, laundry, engine-house, &c., &c.

The central structure is to contain on the first floor, in front, the officers' dining room, a reception room or public parlor, a general office, and a medical office; in the rear of the central hall a library, apothecary's shop, steward's office, stairway, matron's store room and matron's office. The wings on either side will consist of five separate buildings, containing eleven wards for each sex.

They are connected with the centre, and the separate buildings with each other, by fire proof corridors inclosed on all sides. These corridors are built upon the arc of a circle with the concavity to the front. The buildings recede till the extreme end of the last one, on either side, is about three hundred feet from the rear of the administration building. The general plan of the wards corresponds in the main with the 25th proposition of the report of the Association of Superintendents on the construction of hospitals, and this Institution is the first and only one in which the principle has been fully carried out. The rooms are placed upon one side only of the hall of each ward, and as the building, as before stated, has a southern exposure, and the windows are large and numerous, the wards are most favorably arranged for light and thorough ventilation. The

hall itself is broad, and from its position, cheerful and pleasant, and will serve for a recreation and general public room for the patients. A wing is projected to the rear from the centre of each ward. This has a central hall, with sleeping rooms on both sides, and is separated from the ward by a door. In the rear projection toward the connecting corridors, are located the general service rooms, as bathing, clothing, washing-rooms, closets, &c. There is also a dining-room, attendants' room; dormitory and parlor for each ward, conveniently arranged for the purposes for which they are to be used. A room is also provided for special cases, which from sickness or other causes demand extra care or accommodation. The capacity of each ward is adapted to the proportionate number which each class of patients bear to the whole number to be treated in the Institution.

There are several advantages in the plan adopted for this hospital over the rectangular, and also over the ordinary linear plan with return wings :

First.—In the more complete separation of the buildings, which insures better protection against the destruction of the institution by fire.

Second.—In affording more sun-light upon a greater portion of the building.

Third.—It facilitates a better circulation of air between and around the buildings.

Fourth.—It gives the opportunity for better classification.

(a.) By separating more completely the various classes, from the quiet to the most disturbed.

(b.) By extending the out-look from the buildings, classes do not overlook each other.

(c.) It promotes quietness in all the wards, and the convalescents do not see or hear the maniacal patients.

(d.) It allows the exercising yards of the disturbed patients to be more completely separated and distant from those of the more quiet classes.

Fifth.—It increases the efficiency of discipline, among attendants and employés, by preventing their going so readily from ward to ward.

Sixth.—The main hall of each ward, having rooms upon but one side, is rendered lighter, more cheerful, and is more easily and perfectly ventilated.

Seventh.—The projection to the rear, of a portion of the sleeping rooms of each ward, cuts off the view from each other, of the wards appropriated to the men and women.

(a.) It lessens the expense of heating; as these wings used as sleeping apartments, do not require so high a temperature as the wards proper.

This plan combines all the advantages of the cottage and pavilion plans without their disadvantages. It promotes the ease of administration; in the visitation of officers, and the necessary transfer of patients from ward to ward, in all kinds of weather, and at all times of the day and night without exposure.

The basement of the building contains a tramway for carrying the food from the kitchens to the various dining-rooms of the wards, and a passage through which air is forced by fans for the purposes of ventilation. The radiators for heating the building will be placed in the air chamber at the base of the ventilating flues. The basement of the centre building will also contain the kitchen for resident officers. The kitchens one for each of the wings, are located a little distance to the rear of and connected with the second building of each wing by a covered passage way; in the basement there is a continuation of the tramway. The laundry, wash-house, bakery, engine-house, boiler-house, shops and fans, are arranged together in a block of buildings about three hundred feet in the rear of the centre building. The air passage is continued from the centre to this block. Houses for the porter, gardener, engineer, farmer, washer-women, and other outside employés are appropriately located with the design of separation from each other, and proximity to their various places of labor. Toward the northwest, about one thousand feet distant from the central building, will be the farm buildings, consisting of farm-house, barns, sheds, stables, &c.

ELEVATION AND SPECIFICATIONS.

The accompanying plan of the elevation has been adopted. The centre building is four stories in height. The first floor has already been described; the second story will be occupied by the superintendent and family, the third story by the other resident officers. The fourth story will contain the chapel or assembly room for patients, and also several rooms for the help employed in the centre. A special stairway for each sex leads to the chapel. The towers will afford an extended outlook. Of the wings, the first two buildings on either side will be of three stories, the third and fourth of two, and the fifth of one story.

The distinctive features of the wards have been already described.

The buildings are to be substantial and durable, without ornamentation or attempt at exterior effect, beyond what their extent and massiveness will produce. The style of architecture is the Elizabethan, which from its plainness and simplicity is especially adapted for the purpose. All the buildings will be of uncut Medina sandstone. This is a brown freestone and is favorably known as a valuable building material. The footings and foundations are to be of blue limestone. The water-table of the same stone as the wall. The exterior wall will be of rubble masonry with vertical joints and horizontal beds. All stones will be, on their face, not less than eight inches or more than two feet in length or height, and not less than eight inches in the wall. They will be laid on their natural bed and thoroughly bonded with through stones with close joints. The dressings, as sills, lintels, copings, &c., will be chisel-dressed. The linings of exterior walls are to be of brick, thoroughly built and tied to the stone by hoop-iron pieces, inserted in the joint and bent in the middle at

an angle, that moisture may condense and drip between the walls. The air spaces between the walls have openings in the attic. The basement ceilings will be plastered, one coat; the brick walls and brick ceiling over stairs, two coats; all other ceilings and side walls three coats; the last one a hard finish. The floors throughout, above the basement, will be double, the upper floors of rooms to be matched and planed pine not over four and a half inches in width. The floors of the halls to be of hard wood not over two and a half inches in width; every story above the first will have floor beams or joists, lathed and plastered, and ceiling beams placed two feet below, also lathed and plastered. This forms a closed air space for deafening, prevents the cracking of the ceilings from the vibration of the floors, and facilitates their repair without injury to plastered ceilings. All the halls and bath-rooms will be wainscoted in hard woods. The chapel walls will be wainscoted the full height, and the ceiling will have open timber framing, and be ceiled with boards between rafters. All the door-ways and windows will be trimmed with round molding of the same wood as the finish of the rooms. All the doors are to be six paned, and those of the dormitories of pine; others of hard wood to correspond with the finish. The doors of the dormitories, dining and attendants' rooms, will be one inch shorter than the opening, and without a threshold, to allow space for the circulation of air. All the wood for interior finish, including the pine, will be selected, free from sap or large knots, and oiled. The sash will be hung with weights, and upon the wards, the cords concealed from view. The stairs will be of iron, and the balustrade filled in with wire netting. All the roofs and sides of the dormers will be slated with black Pennsylvania slate, all from the same

quarry, laid upon roofing board covered with tarred paper. The bath tubs will be of earthénware, porcelain lined, supplied through a one inch pipe, with hot and cold water, and waste through the hoppers of the water closets. The water closets on the wards will have the strongest cast-iron enameled hoppers without traps; from each will descend a five inch soil pipe without bend or branches to the main sewer pipes, on entering which it will bend to form a water trap one inch deep. Each hopper will also have an independent ventilating pipe of cast or galvanized iron. In each story of the building there will be a closet containing an inch and one-half water supply pipe with hose attachment, and one hundred and forty feet of hose ready for use in case of fire. The main of the water supply is of iron, six inches in diameter. It leaves the street main in Forest Avenue and passes directly to the centre building, to the corridor in the rear. It there divides and a rising main of three inches in diameter for each building supplies the centre, and the wards on either side. At various points branches are sent out to hydrants upon the premises. The pressure of the water from the reservoir is sufficient to force it several feet above the buildings.

The plan of forced ventilation by means of fans will be employed, the air to be driven through the main air passage or plenum, over the heating or radiating surface in the basement and carried in flues in the main walls into the wards, opening on a line above the door frames. The exit or ventilating flues to start from the rooms and wards on the upper line of the base board, opening into the attics, and carried out by ridge ventilation. Heating will be by steam.

We have attempted but a sketch of the specifications, hoping to convey to those interested in the subject of building, a general knowledge of the plan and design of

the work. Much labor has been expended upon the grounds in erecting fences, putting up temporary buildings, and arranging for future operations. A large quantity of material has been prepared and is already at hand.

The foundation of the centre building, connecting corridors, and two of the buildings of one wing have been laid, and the work is being rapidly pushed forward.

The appropriations thus far have been \$300,000.

CASE OF EXCESSIVE HYPODERMIC USE OF MORPHIA. THREE HUNDRED NEEDLES REMOVED FROM THE BODY OF AN INSANE WOMAN.

REPORTED BY JUDSON B. ANDREWS, M. D.

A woman, thirty years of age, single, seamstress, with no hereditary tendency to insanity; but was of a highly nervous and excitable organization, emotional and irregular in feeling; at times buoyant and lively, and then gloomy and depressed. Her health during early life was delicate, though she suffered from no definite form of disease. At the age of 20, in April, 1862, she was seized with pain in the head. It was of short duration, but very severe, and during its continuance the patient was delirious. Attacks of the same character, both in the severity of the pain and the mental disturbance have occurred since, at intervals of from one to three months.* In 1864, she had acute rheumatism, and in 1865, a severe attack of diphtheria.

* From the subsequent history of the patient, especially while in the asylum, we are led to believe that these attacks of delirium took place at menstrual periods.

After the local disease of the throat had apparently subsided, vomiting supervened, and was repeated every few hours for some five weeks. To relieve this condition and procure sleep, hypodermic injections of morphia were successfully employed; for about one week and the patient rapidly regained her health. Some two years after this, or in July, 1867, she had an attack of inflammation of the bowels and peritoneum, and for four weeks was delirious most of the time. She improved somewhat in health, but for the four months succeeding, had frequent attacks of frenzy, during which she often threatened to take her own and her mother's life, and became very difficult to control. In October following, she had improved so far as to pass from the immediate charge of her physician. Soon after this, he ascertained she was using hypodermic injections of morphia, to relieve pain in her limbs and different parts of her body. I quote from his letter:

I was informed that she was using it, (morphia,) to a considerable extent, and called immediately to explain to her the effects and danger attending the practice. I believe every effort was made that could be, to prevail upon her to desist, but all to no purpose. She was cunning and artful, and would almost always study out some plan to get the morphia. She has used as much as two drams in a week, in one or two well authenticated instances. The usual amount was one dram per week. She used but little, if any, for three or four months before she was sent to the asylum, for it was very difficult for her to get it. She has acted very strangely ever since her first sickness. She has been truly a mystery, which no one could solve.

Her mother says:

That for years she has complained of pain, and pressed her hand on either side of her head, with the exclamation, "Oh mother, mother, I shall die!" That for six years she has complained of such soreness of the head that when she passed her hand over it, in smoothing her daughter's hair, she would cry out: "Oh mother, don't; it hurts me so!" That five years ago, in 1867, she was

obliged to call in help, as the patient threatened and intended to take her own life. That both before and after she began the use of morphia, her conduct was peculiar and erratic; that she was emotional, and easily disturbed by trifles. That after the morphia habit was known, her conduct for many years preceding, was wrongly attributed to this cause.

A few weeks before she was sent to the asylum, she passed into an acutely maniacal condition, in which she was sleepless, ate little and irregularly, lost flesh and strength rapidly, and became quite feeble. She was destructive of clothing, pulled her hair out, was noisy, incoherent, and violent; opposed care, wandered about, and was with difficulty controlled. In this condition, she was admitted to the institution, on the 5th of May, 1871. She was carried to the ward, and placed in bed. Examination revealed scars and ecchymosed spots, covering nearly the whole of the body which could be reached by her own hand. She asserted that she had employed the hypodermic injections for three and one-half years, once, and much of the time twice a day, making in all about two thousand injections; that during the last few months of its continuance, she had used a dram and one-half of morphia per week; that she inserted the needle perpendicularly to the surface, and often carried its full length into the tissues. For two days she was sleepless, and retained no nourishment. Chloral, in thirty grain doses was then administered, which was tolerated by the stomach, and secured sleep. The vomiting gradually became less frequent, and soon ceased. She ate well, gained flesh and strength, all maniacal symptoms subsided, and in twenty days she was up and about the ward. Menstruation, as she said, had been suppressed for two years. As she complained of pain in the back, and other symptoms which usually preceded it, she was placed on use of capsules of apiol, and on the 24th of June, began to

menstruate, but the flow was scanty, and accompanied by much pain.

During the month following, she steadily gained in mental strength, and became quite stout. At time of next menstrual period, the right breast swelled to an extraordinary size, so that we were obliged to suspend it with adhesive straps. It was hard, and extremely sensitive to the touch. This condition of swelling and tenderness, extended in a narrow ridge to the spine. The state of the breast was at first supposed to be owing to the sympathetic action of the organ, with the renewed activity of the menstrual function. For two weeks, applications were employed, without success, to relieve the pain and tension. At this time, on the 13th of August, the patient in rubbing her hand over the breast, discovered an elevated point, just under the skin, which on pressure, gave a pricking sensation. This was cut down upon, and a broken needle extracted. On the 15th, another needle was removed. The breast was now inflamed, and extremely sensitive. August 28, another needle was taken out. August 29, menstruation began again. The flow was profuse, and she became at once delirious. Was talkative, restless, profane and obscene, and pulled her hair out. She continued in this condition some twelve hours, and, as she stated, the next day, was entirely unconscious of what had occurred.

From this time till September 28, from one to five needles were removed daily from the breast. Menstruation then occurred again, and was characterized as before by a similar attack of mental disturbance. After this, during the months of October and November, needles were taken from various parts of the body; from the left breast, the abdominal parietes the *Mons Veneris*, the *labia*, and *vagina*. Of these latter, some

passed across the urethra, and rendered urination difficult and painful; others across the *vagina*, either end being imbedded in opposite sides. Some were removed from the thighs, from the leg, down to the ankle, from the buttocks, from about the *anus*, from the back as high up as between the shoulders. The largest number extracted in any one day, was twelve.

On one occasion, ether was administered, but the difficulty experienced in bringing her under its influence, and the mental disturbance produced by it were so great that it was not again resorted to. During the whole period, to her final illness, she retained her flesh, though she ate and slept irregularly, under use of tonics and sedatives. She was in a variable mental state, at times irritable, petulant, fault-finding, attempting to create ill-feeling between attendants, and demanding unnecessary care and waiting upon. At other times, she was abnormally cheerful, gay, pleasant, and fulsome of praise of all around her.

For the first two months, but comparatively little pain was felt in the extraction of the needles. The skin was thickened, harsh and dry, and almost insensible, from the prolonged and distributed use of the injections. Afterward, she suffered acutely, and often begged, with tears, that their removal might be postponed from day to day. About a month before death, she had an attack of localized pneumonia, affecting the lower portion of right lung. This was accompanied by stridulous breathing, spasm of the glottis, *globus hystericus*, crying, and other hysterical manifestations. It was followed by an attack resembling muscular rheumatism, characterized by great pain and hyperæsthesia of surface. The right arm was swelled, hot and extremely sensitive. It was supported on a pillow and kept bathed in anodyne lotions. She lost appetite and

sleep, became much depressed, and gave up all hope of recovery. Her tongue became dry and brown, pulse rapid, secretions offensive, and mind very feeble. A diarrhoea supervened and the evacuations of bowels and bladder were involuntary. She became unconscious, and finally comatose, and died on the 25th of December, 1871.

No needles were removed during the two last weeks; 286 were taken from her body during life; 11 were found in the tissues after death; 3 were passed from the *rectum* during sickness; making a total of 300 needles and pieces. Of this number, 246 were whole, and 54 were parts of needles. One was a No. 1 sewing machine needle, and several were bent. They varied in size from No. 4 to No. 12. As regards position in the body, they were distributed about as follows: in right breast, 150; left breast, 20; abdomen, 60; genitals, 20; thighs and legs, 30; back, 20. Of those removed after death, 5 were found in the right and 3 in the left breast; one in a small abscess in the epigastric, and one in the right iliac region, the point impinging upon the peritoneum, which was discolored with rust; and one in the upper part of lower lobe of left lung. The presence and position of the needles were indicated to the patient by the pricking sensation occasioned by muscular movements. They were removed in a few instances at first, by cutting down upon them. This proved to be a painful, and from the movements of the needles in the tissues, a difficult process. Hemorrhage from the small vessels, at times, gave some trouble. Afterwards, by manipulation, the ends of the needles were engaged between the thumb and forefinger, and the points, forced through the skin, were seized and the needles extracted with forceps. Sometimes much force was required to withdraw them. They

changed position quite readily, and frequently moved from one to two inches in the day. They produced little local irritation or trouble beyond the pricking sensation, and did not seem to have contributed in any notable degree toward producing the fatal result. In regard to the presence of this large number of needles in the system, no information could be obtained. The patient repeatedly and persistently denied any knowledge of having introduced them, either by the stomach or through the skin. Her mother, who visited the Asylum, could throw no light upon the subject, and was entirely ignorant of the fact until informed by us. She however, recalled the circumstance that the patient purchased, at one time, ten papers of needles, and could account for only two of them. They were not obtained or introduced while in the Asylum. She was under strict surveillance, and had no means of obtaining any number of needles, and those removed were all rusted and bore evidence of having been a long time in the body. The stomach was closely examined after death, and was in a perfectly healthy condition, with no evidence of any previous inflammatory action.

The only theory, which seems to us at all tenable, is, that they were introduced through the skin, while she was under the influence of morphia, hypodermically administered, and while suffering from hysteria. That some were found in positions where they could not have been inserted by the patient, can be accounted for by their movements in the tissues, which were observed so often during the life of the patient.

The diseased condition of the brain and its membranes was a cause sufficient to account for the abnormal mental action and conduct of her who had been "truly a mystery which no one could solve." We close this remarkable case with a transcript of the post-mortem examination.

Autopsy.—Rigor present, body well nourished; anterior surface thickly studded with small cicatrices; abdomen covered with thick layer of fat. A small abscess in abdominal wall, two inches above umbilicus, three inches by one and one-half, was filled with pus, and contained one needle. A second abscess, two inches above and to the right of the *symphysis pubis*, immediately under Poupart's ligament, contained another needle. This pressed upon the peritoneum, which though discolored by rust, was not inflamed. From the right breast, one whole and four broken needles, and from the left, one whole and two broken needles, were removed.

Head.—Arachnoid opaque and thickened over right hemisphere. The left hemisphere was covered by a thin layer of pus, contained in the sub-arachnoid space. Marked depression of convolutions at vertex of both hemispheres. The brain substance was firmer than normal. The ventricles were empty, and the choroid plexus contained numerous small cysts upon its surface, filled with serum.

Thorax.—The lower lobe of the right lung was hepatized. A whole needle was found in the upper part of the lower lobe of the left lung.

Abdomen.—The liver was soft and fatty, and the spleen enlarged; kidneys were normal. The stomach was subjected to a critical examination. It was found normal, and there was no evidence that the needles were introduced into the system through that organ.

PHYSIOLOGY.—THE FUNCTIONS OF THE BRAIN.

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The first care of physiology was to localize the functions of life in the different organs of the body, which serve as their instrument. Thus, digestion was attributed to the stomach, circulation to the heart, respiration to the lungs; thus, also, the seat of intelligence and of thought was placed in the brain. However, in respect to this last organ, it has been deemed necessary to make reservations, and not to admit that the metaphysical expression of the intellectual and moral faculties could be the manifestation, pure and simple of the cerebral function. Descartes, who should be ranked among the promotores of modern physiology, because he very well understood that explanations of the phenomena of life are wholly dependent upon the general physical and mechanical laws, has expressed himself clearly in this respect. Adopting the ideas of Galen upon the formation of the animal spirits in the brain, he gives them for their office, to spread themselves by means of the nerves throughout the animated machine, in order to bear to each one of the parts the impulsion necessary to its special activity. Yet, above and distinct from this physiological function of the brain, Descartes allows the soul, which gives to man the faculty of thinking: its seat, according to him, is in the pineal gland, and it directs the animal spirits which emanate from it and are subordinated to it.

The opinions of Descartes touching the functions of the brain could not to-day bear the slightest physiologi-

cal criticism; his explanations, founded upon insufficient anatomical knowledge, could only give rise to hypotheses marked with the grossest mechanism. Nevertheless they have a historical value; they show us that this great philosopher recognized in the brain two things; first, a physiological mechanism, then, above and outside of it, the thinking faculty of the soul. These ideas are very nearly those which have since prevailed among very many philosophers and certain naturalists; the brain, where the most important functions of the nervous system are completed, can not be the real organ of thought, but only the *substratum* of intelligence. This objection, in fact, is very often made, that the brain forms a physiological exception to all the other organs of the body, in that it is the seat of metaphysical manifestations, which are not within the province of the physiologist. We can conceive, they say, that digestion, locomotion, respiration, &c., may be referred to mechanical phenomena, or the phenomena of physics and chemistry: but they do not admit that thought, intelligence, and will can be brought under such explications. There is here, they say, an abyss between the organ and the function, because the question is concerning metaphysical phenomena and no longer concerning physico-chemical mechanisms.

De Blainville in his series of zoölogical lectures strongly insisted upon the definition of the organ and the *substratum*. "In the organ," said he, "there is a manifest and necessary relation between the anatomical structure and the function; in the heart, which is the organ of the circulation, the conformation and arrangement of the openings and their valves account perfectly for the circulation of the blood. In the substratum, nothing similar is observed: the brain is the

substratum of thought; it has its seat there, but thought can not be deduced from the cerebral anatomy." From such considerations it has been claimed that the reason might, in the insane, be *essentially* disturbed, that is to say without there existing any material lesion of the brain. The converse even has been maintained, and in physiological treatises cases are cited where the intellect apparently remained intact in individuals whose brain was softened or hardened. The progress of science has now done away with these doctrines; yet it must be owned that the physiologists who are warranted by the most delicate modern researches concerning the structure of the brain in localizing thought in a particular substance, or in nerve-cellules of a determinate size and order, have no more resolved the question, for all they have in reality done is to oppose materialistic to spiritual hypotheses. The only legitimate conclusion to be drawn from the foregoing is that the mechanism of thought is unknown to us, and to this conclusion all will probably assent. The principal question which we have proposed, however, none the less remains to be answered, for what it concerns us to know is, whether our ignorance upon this subject is a relative ignorance which will disappear with the progress of science, or whether it is rather an absolute ignorance, by which we mean that we are here concerned with a vital problem, which must forever remain outside the sphere of physiology. For my part, I reject this last opinion, because I do not admit that scientific truth can thus be divided into portions. How, indeed, is it to be conceived that the physiologist is empowered to explain the phenomena which are operating in all the organs of the body, except a part of those which are going on in the brain? Such distinctions can not exist in the phenomena of life. These phenom-

ena undoubtedly present very different degrees of complexity, but they are all equally entitled to be considered accessible or inaccessible to our investigations, and the brain, however marvelous may appear to us the metaphysical manifestations of which it is the seat, can not constitute an exception to the other organs of the body.

II.

The metaphysical phenomena of thought, of consciousness, of intelligence, which serve as the various manifestations of the human soul, are, considered from the physiological point of view, only ordinary phenomena of life, and can be nothing but the result of the function of the organ which expresses them. We shall proceed to show that the physiology of the brain is to be deduced, as well as that of all the other organs of the body, from physiological experimentation, and the knowledge of pathological anatomy.

The brain follows, in its physiological development, the common law; that is, it becomes more voluminous as the functions, over which it presides, increase in force. In proportion as greater intelligence is manifested, we see the brain, in the animal series, acquiring a greater development; and it is in man where the intellectual phenomena reach their highest expression, that the cerebral organ presents the most considerable volume. The intelligence of different animals can be inferred from the form of the brain, and the number of the convolutions which increase its surface: but it is not merely the exterior aspect of the brain which changes when its functions are modified, but it presents, at the same time, in its interior structure, a complexity which increases with the variety and intensity of the intellectual manifestations.

Respecting the texture of the brain, we are no longer in the time of Buffon, who regarded the brain, as he called it contemptuously, as a mucous substance of no account. The progress of general anatomy and histology has taught us that the cerebral organ possesses a texture which is at once the most delicate and the most complex of all the nervous apparatus. The anatomical elements of which it is composed are nerve-elements, under the form of tubes and cellules combined and united with each other. These elements are, in all animals, alike in their physiological properties and their histological characters; they differ in respect of number, crossings, connexions, in a word, in the *arrangement*, which presents a particular disposition in the brain of each species. The brain, in this, follows also the general law, for, in all the organs, the anatomical element maintains fixed characteristics by which it may always be recognized; organic completeness especially consists in the arrangement of these elements, which offers, in each animal species, a specific form. Each organ, is then, in reality, an apparatus whose constituent elements remain identical, but among which the grouping becomes more and more complicated, according as the function itself proves to be more varied and more complex.

If we now consider the organic and physico-chemical conditions necessary to the maintenance of life and the exercise of its functions, we shall see that they are the same in the brain as in all the other organs. The blood acts upon the anatomical elements of all the tissues, bringing them the conditions of nutrition, of temperature, of humidity, which are indispensable to them. When any organ whatsoever is less abundantly supplied with blood, its functional activity is lessened, and the organ is in repose; but, if the sanguineous fluid is

suppressed, the elementary properties of the tissues are gradually injured, while, at the same time, its functions are destroyed. It is absolutely the same with the anatomical elements of the brain. From the time that the blood ceases to be supplied to the brain, the nerve-properties are injured, as well as the cerebral functions, which finally disappear, if the anæmia becomes complete. A simple modification in the temperature of the blood, in its pressure, is sufficient to produce profound disturbances in the sensibility, the movements, or the will.

All the bodily organs present to us alternately a state of repose and a state of functional activity in which the circulatory phenomena are essentially different. This has been shown beyond a doubt by numerous observations made upon the most diverse organs. If, for instance, we examine the alimentary canal of an animal when fasting, we find the mucous membrane which covers the inner surface of the stomach and the intestines of a pale color, and slightly vascular; during digestion, on the other hand, it has been ascertained that the same membrane is highly colored and distended by the blood which flows thither with great force. These two circulatory phases, in the state of repose and in the state of functional activity, have been directly verified in the stomach in the case of the living man.

All physiologists are acquainted with the history of the young Canadian accidentally wounded by a musket which was discharged, with the muzzle almost touching his left side. The abdominal cavity was laid open with an enormous wound, and the food taken at the last meal escaped from a large hole in the stomach. The patient was cared for by Dr. Beaumont, Surgeon in the United States army; he recovered, but a fistulous sore remained, from fourteen to sixteen inches in circumference, by means of which different substances could be introduced

into the stomach, and its operations readily observed. Dr. Beaumont, wishing to study this remarkable case, took the young man into his service: his health, and especially his digestive powers, having been fully restored. He kept him in his employment for seven years, and, during this period, made many observations of the highest physiological interest. When the interior of the stomach was observed in a state of fast, the inner membrane could be distinctly perceived. It formed irregular folds, its surface of a pale rose-color was unmoved, and was lubricated only by mucus. As soon as the food descended into the stomach and touched the mucous membrane, the circulation was quickened, the color became brighter, and peristaltic movements manifested themselves. The mucous papillæ then poured out the gastric juice, the clear and transparent fluid whose office it is to dissolve the alimentary substances. When the mucus, with which the membrane was covered, was wiped off with a sponge or a piece of fine linen, the gastric juice was immediately seen to reappear and collect in little drops, which streamed along the walls of the stomach, as drops of sweat upon the face. What we have just seen take place upon the surface of the mucous membrane, is observed also in the intestines, and all the glandular organs attached to the digestive apparatus. The salivary glands, and the pancreas, present, during the intervals of digestion, a pale and exsanguious tissue in which the secretions are wholly suspended. During the digestive period, on the contrary, these same glands are gorged with blood, rutilant, almost erectile, and from their ducts flow in abundance liquid secretions.

We must needs then recognise in the organs two kinds of circulations; on the one hand, the *general circulation*, known since Harvey, and on the other, the

local circulations, which have only recently been discovered and studied. In the phenomena of general circulation, the blood only in some measure traverses the parts in its passage from the arteries into the veins; in the phenomena of the local circulation, which is the true functional circulation, the sanguineous fluid penetrates into all the recesses of the organ, and accumulates round the anatomical elements to arouse and excite their mode of special activity. The sensitive and vaso-motor nervous system presides over all the phenomena of the local circulations which accompany the organic functions: thus the saliva flows abundantly when a sapid substance affects the nerves of the buccal mucous membrane: thus, too, gastric juice is formed on occasion of the contact of the food with the sensitive surface of the stomach.

This mechanical excitation of the peripheric sensitive nerves, affecting the organ by reflex action, may, however, be replaced by a purely psychical or cerebral excitation. This is demonstrated by a simple experiment. Taking a horse when fasting, we perceive on the side of the jaw the excretory canal of the parotid gland, and on dividing this duct, nothing issues from it; the gland is at rest. If, now, we offer the horse oats, or, better still, if without showing him anything, we go through with a movement which indicates to the animal that we are going to feed him, straightway a continuous stream of saliva flows from the parotid duct, and at the same time the tissue of the gland is injected and becomes the seat of a more active circulation. Dr. Beaumont observed analogous phenomena in the case of his Canadian. The idea of a savory viand determined not only a flow of the secretions in the salivary glands, but also induced a flow of blood to the mucous membrane of the stomach.

What we have just said respecting the local or functional circulations applies not only to the secretory organs where the separation of a liquid takes place in the formation of which the blood more or less coöperates; we have here a general phenomenon, which is observed in all the organs, whatever may be the nature of their functions. It is the same with the muscular system, whose work is of a purely mechanical nature, as with the glands, which act chemically.. At the moment when a muscle enters into the exercise of its function, the blood circulates with greater activity, and this again is moderated when the organ enters into repose. The nervous system in its whole periphery, the spinal marrow and the brain, which are employed for the manifestation of the phenomena of innervation and intelligence are also, as we shall see, subjected to this law.

The relations which exist between the circulatory phenomena of the brain and the functional activity of this organ, were long obscured by erroneous opinions upon the conditions of sleep, which is correctly regarded as the state of repose of the cerebral organ. The Ancients believed that sleep was the result of the pressure of the blood upon the brain, when its circulation slackened. They supposed that this pressure was exerted especially at the back of the head, or the point where the venous sinuses of the dura mater end in a common confluent, which is still called the *Torcular* or *Herophilus' Press*, from the name of the anatomist who first described it. These hypothetical explanations have been transmitted even to our times: it is only within a few years that experiments have shown their falsity.

It has been proved by direct experiment that the brain, during sleep, in place of being congested, is, on the contrary, pale and exsanguious; while, in the waking state, the circulation, having become more ac-

tive, induces an afflux of blood, which is in proportion to the intensity of the cerebral functions. In this respect, natural sleep and the anaesthetic sleep produced by chloroform resemble each other; in both cases, the brain, being in a state of repose or inaction, presents the same pallid appearance, and relative anaemia. The experiment is as follows: a portion of the bony wall of the cranium of an animal is carefully removed, and the brain is thus laid bare, so that the circulation at the surface of this organ can be observed. The animal is then made to inhale chloroform in order to produce anaesthesia. At first, in consequence of the stimulating effect of the chloroform, the brain is seen to become congested, and hernia takes place on the outside; but, as soon as anaesthetic sleep comes on, the cerebral substance subsides, becomes pale, while the capillary circulation diminishes so long as the state of sleep or of cerebral repose continues.

In order to observe the brain during the period of natural sleep, dogs have been subjected to the process of trepanning: the piece of bone that is taken out from the cranium is then replaced by a watch-crystal exactly fitted, to prevent the irritating action of the air upon the wound. Animals bear this operation perfectly well. Looking in by this sort of window upon the brain during the waking state, and also during sleep, we ascertain that when the dog is asleep, the brain is always paler, and that a fresh flow of blood regularly manifests itself on awakening, when the cerebral functions resume their activity. Facts, analogous to these observed in animals, have been directly seen in the human brain. A person, who was the victim of a terrible railway accident, suffered the loss of a considerable portion of the skull. The brain was laid open for an extent of more than three inches in length by six inches in width. The

injured man suffered from frequent and severe attacks of epilepsy and coma, during which the brain invariably swelled. After these attacks, sleep came on, and the cerebral hernia gradually decreased. When the patient was awakened, the brain mounted up anew, and rose to a level with the outer bony table. In the case of another person, whose skull was fractured, the cerebral circulation was observed while anæsthetics were administered. When the inhalation began, the cerebral surface became arborescent and injected; the hemorrhage and cerebral movements increased, the surface of the brain gradually sank below the aperture, while, at the same time, it became relatively pale and anæmic.

On the whole the brain is subject to the common law which regulates the circulation of the blood in all the organs. By virtue of this law, when the organs are asleep, and their functions are suspended, the circulation becomes less active; it increases, on the contrary, as soon as the functional activity manifests itself. The brain, I repeat, makes no exception to this general law, as has been incorrectly believed, for it is now proved that the state of sleep is coincident not with the congestion, but, on the contrary, with anæmia of the brain.

If, now, we would comprehend the relation which exists between the increased circulation of the blood and the functional state of the organs, we shall readily perceive that this increased flow of the sanguineous fluid is connected with a greater intensity in the chemical metamorphoses which are going on in the tissues, as well as with an increase in the caloric phenomena, which are its necessary and immediate consequence. The production of heat in living bodies has been from the most ancient times an established fact: but the Ancients had false ideas upon the subject of heat: they attributed it to an

innate organic power having its seat in the heart, which was thus the fire-place, where the blood and the passions boil. More lately, the lungs were considered as a sort of hot air-stove, whither the blood came in successive masses to derive the heat which the circulation was commissioned to distribute to the whole body. The progress of modern physiology has proved that all these absolute localizations of the condition of life are chimeras. The sources of animal heat are in all the parts, and in no one part exclusively. It is only by the functional harmony which exists among the different organs that the temperature is maintained at a fixed point; or nearly so, in man and the warm-blooded animals. There are, in truth, as many calorific fire-places as there are particular organs and tissues, and we ought to connect everywhere the production of heat with the functional work of the organs. When a muscle contracts, when a mucous surface or a gland secretes, there is invariably a production of heat at the same time that there is produced an increase of activity in the local circulatory phenomena.

Is it the same with the nervous system and the brain? Modern experiments have proved this beyond a doubt. Every time that the spinal marrow and the nerves manifest sensibility or movement, every time that any intellectual work goes on in the brain, a corresponding quantity of heat is produced there. We should therefore consider heat in the animal economy as a resultant of the organic work of all the parts of the body; but it, at the same time, becomes also the principle cause of the activity of each one of these parts. This correlation is especially indispensable in the case of the brain and the nervous system, upon which all other vital action is dependent. Experiments have shown that the temperature of the tissue of the

brain is higher than that of any other bodily organ. In man and the warm-blooded animals, the brain itself generates the heat which is necessary for the manifestation of its properties as a tissue. If this were not the case, it would inevitably be cooled, and the cerebral functions would immediately be enfeebled, and intelligence and will disappear. This occurs in the cold-blooded animals, in whom the calorifying function is not strong enough to enable the organism to resist the external causes which operate to cool it.

III.

With regard to the organic or physico-chemical conditions of its functions, the brain, then, presents us nothing exceptional. If, now, we pass to physiological experimentation, we shall see that it succeeds in analyzing the cerebral phenomena in the same way as those of all the other organs. The experimental process, which is most generally practiced for the purpose of determining the functions of the organs consists in removing or destroying them slowly or suddenly so that we can judge as to the use of the organ by the special disturbances thereby occasioned in the vital phenomena. This process of organic destruction or ablation, which is, in fact, a brutal method of vivisection has been applied upon a grand scale to the study of the whole nervous system. Thus, when a nerve is cut and the parts to which it is distributed lose their sensibility, we conclude that we have here a sensory-nerve; if the power of movement is lost, we infer that we have to do with a motor-nerve. The same method has been employed for ascertaining the functions of the different parts of the encephalic organ, and although we are here met with new practical difficulties by reason of the complexity of the parts, this method has furnished gen-

eral results which are incontestable. It was already known to all that intelligence is not possible without brain, but experimentation has pointed out precisely the rôle which each portion of the encephalon has to perform. We learn that it is in the cerebral lobes that consciousness or intelligence properly so-called resides, while the lower portions of the encephalon contain nerve-centres appropriated to organic functions of an inferior order. This is not the place to describé the particular rôle of these different kinds of nerve-centres, which are superposed and gradually ranged far even into the spinal marrow; it is sufficient to prove that we owe our knowledge upon this point to the method of vivisection by organic ablation which is applied, in general, in all physiological investigations. Here, too, the brain comports itself as all the other organs of the body, in this regard that each lesion of its substance introduces into its functions characteristic disturbances, which always correspond to the injury.

The physiologist is not restricted to causing by means of cerebral lesions, local paralyses, the result of which is to suppress the action of the will upon certain organs. He can also, by merely disturbing the equilibrium of the cerebral functions, suppress freedom in the voluntary movements. Thus the experimenter by injuring the peduncles of the cerebellum, and different points of the encephalon, can make an animal walk as he chooses, to the right, or the left, forwards or backwards, now by a directing movement, now by a movement of rotation upon the axis of the body. The animal's will persists, but it is no longer able to direct its own movements. In spite of the efforts of its will, it goes *fatally* in the direction that the organic lesion has determined. Pathologists have noted numerous facts of an analogous character in reference to man. Lesions

of the peduncles of the cerebellum induce in man as well as in animals, rotary movements. Some, again, can only walk straight forward. By a cruel irony, a brave old general can only go backward. The will, which proceeds from the brain, does not then exert its force upon our locomotive organs themselves; it is exerted upon the secondary nerve-centres, which must be held poised in a perfect physiological equilibrium.

There is another more delicate experimental method, which consists in introducing into the blood different toxic substances designed to act upon the anatomical elements of the organs, which are left in their place and in their integrity. By means of this method, we can destroy separately the properties of certain nervous and cerebral elements just as we isolate also the other organic elements, whether muscular or sanguineous. Anæsthetics, for example, destroy consciousness and weaken the sensibility, while leaving intact the motor-principle. *Curare*, on the contrary, destroys the motor-power, but leaves intact the sensibility and the will; the poisons that affect the heart destroy the contractile power of the muscles, while the oxide of carbon destroys the oxygenous property of the sanguineous globule without in any wise modifying the properties of the nerve-elements. It will thus be seen that by this method of investigation or elementary analysis of the organic properties, the brain and the phenomena of which it is the seat may in fact be reached in the same way as all the other functional apparatus of the body.

There is, finally, a third method of experimentation, which may be termed that of experiment by redintegration. This method unites, in a measure, physiological analysis and synthesis; it permits us to establish by proof and counter-proof the relations which bind the function to its organ in the cerebral manifestations.

When the brain is removed from one of the lower animals, the function of the organ is necessarily suppressed ; but the persistence of life in these beings permits the brain to be re-formed, and as the organ is re-generated, its functions reappear. This method of experiment may be tried successfully, even with the superior animals, as birds, where the intelligence is much more highly developed. In a pigeon, for example, the cerebral lobes having been removed, it immediately loses the use of its senses and the power of seeking food. If, however, the animal is supplied with nourishment by injection, it is able to survive, because the nutritive functions have remained intact, in so far as their special nerve-centres have been respected. The brain, with its special anatomical elements is gradually re-generated, and, in proportion as this re-generation is operated, we see the use of the senses, the instincts and the intelligence of the animal return. Here, I allow myself to repeat, the process of experiment has been complete ; there has been, in a measure, both analysis and synthesis of the vital function, since the successive destruction of the different parts of the brain has suppressed, in succession, its different functional manifestations, and the re-production, in succession, of these same parts, has made these same manifestations reappear. It is needless to add that the same thing holds good for all the other parts of the body susceptible of redintegration.

Diseases, which are in reality only vital disturbances caused naturally instead of being occasioned by the physiologist, affect the brain in accordance with the ordinary laws of pathology, that is to say, by giving rise to functional disturbances which are always in relation to the seat and the nature of the lesion. In a word, the brain has its pathological anatomy as well as all the organs of the economy, and cerebral pathology has its

special symptomatology, as have also the other organs. In mental alienation we see most extraordinary disturbances of the reason, and the study of these is a fruitful mine for the physiologist and the philosopher to draw from; but the different forms of insanity or of delirium are only derangements of the normal function of the brain, and these alterations of functions are, in the cerebral as in the other organs, connected closely with certain anatomical alterations. If, in many cases, they are not yet known, the fault lies only in the imperfection of our means of investigation. Moreover, do we not see that certain poisons, such as opium, *curare*, paralyze the nerves and the brain, without our being able to discover in the nervous substance any visible alteration? Yet we are certain that these alterations exist, for to admit the contrary would be to admit an effect without a cause. When the poison has ceased to act, we see the intellectual disturbances disappear, and the normal state return. It is the same when the pathological lesions are cured, the disorders of the intelligence cease, and reason returns. Pathology, then, furnishes us here, too, with a sort of functional analysis and synthesis, just as is found in the experiments of redintegration. Disease, in fact, suppresses more or less completely the function, by altering, more or less completely the texture of the organ, and cure restores the function by re-establishing the normal organic state.

If the functional manifestations of the brain were the first to attract the attention of philosophers, they will certainly be the last which the physiologist will explain. We are of opinion that the progress of modern science now permits of entering upon the physiology of the brain; but before entering upon the study of the cerebral functions, it is necessary to have a definite understanding as to the point of departure. We have

aimed in this article to state only one term of the problem, and to show that it is necessary to renounce the opinion that the brain forms an exception in the organism, that it is the *substratum* and not the organ of the intelligence. This idea is not only an antiquated, but an anti-scientific notion, injurious to the progress of physiology and psychology. How conceive, indeed, that any apparatus whatever in the domain of brute or animate nature can be the seat of a phenomenon without being its instrument? Persons are evidently influenced by pre-conceived ideas in considering the question of the functions of the brain, and the solution of the question is combatted by arguments concerning the tendency of certain views. Some will not admit that the brain is the organ of the intelligence, just as the heart is the organ of the circulation, because they fear to be involved in materialistic doctrines, while others, on the contrary, hasten to place the intelligence in a round or fusiform nerve-cellule, so as not to be taxed with spiritualism. As for us, we will not allow ourselves to be prejudiced by these fears. Physiology shows us, that, save the difference and the greater complexity of the phenomena, the brain has the same claim to be the organ of the intelligence, as the heart to be the organ of the circulation, or the larynx to be the organ of the voice. We discover everywhere a necessary connection between organs and their functions; here is a general principle, from which no organ of the body can be exempted. Physiology should, then, after the example of the most advanced sciences, disengage itself from philosophical trammels which would impede its march; its mission is calmly and confidently to seek the truth, its end, to establish the truth imperishably, without ever having to fear the form under which it may appear unto her.

THEORIES OF EVOLUTION—No. III.

PROF. HUXLEY'S REPLY TO MR. DARWIN'S CRITICS.

More Criticisms on Darwin: and Administrative Nihilism, by T. H. HUXLEY, LL. D., F. R. S., author of "Lay Sermons," "Man's Place in Nature," &c. New York: D. Appleton & Co.

1. *Contributions to the Theory of Natural Selection*, by A. R. WALLACE: 1870.
2. *The Genesis of Species*, by ST. GEORGE MIVART, F. R. S. (Second Edition:) 1871.
3. *Darwin's Descent of Man, Quarterly Review*, July, 1871.

In some former articles in this JOURNAL, we sought to bring together in as condensed a form as our limited space required, the various arguments and considerations that seemed to us to constitute a valid array of objection to Mr. Darwin's Theory of Evolution by Natural and Sexual Selection, especially as relied upon to determine the question of the origin of man. Those arguments are derived from the three departments of science commonly understood as zoölogical, psychological, and ethical: though all these would now be comprehended by the Materialists under the single head of "Biology." Although each of the points treated of in the preceding articles, or referred to as treated by others, might be expanded into a volume, and the full force of the argument, especially in the psychological and ethical divisions of the subject may, through a compulsory brevity, have been inadequately represented, we do not propose to supplement it here, by any formal statement or discussion. Our present object

is simply to remark upon the recent paper of Prof. Huxley in the *Contemporary Review*, the title of which is given in the republication named at the head of this article: and to express our gratification at finding how little even the ablest writer among the advocates of Mr. Darwin's theory has to show by way of real answer to the arguments of Messrs. Wallace and Mivart.

As in the case of the British Geologists against Sir Wm. Thompson, (*Lay Sermons*, p. 229,) Prof. Huxley appears to have constituted himself the "Attorney-General" for the Darwinian Evolutionists: and it may well be doubted, whether, in point of literary finish as well as scientific acuteness, any more competent person could have been selected for the special task which he has assigned himself. But the style of a partisan advocate is readily distinguishable from that of a judicial investigation of truth: and it seems something incongruous with the patient calmness of scientific discussion that we should be so often encountering arguments *ad invidiam*, and such subtle mixture of the covert sneer and irreverence as the following:

Mr. Wallace thinks it necessary to call in an intelligent Agent—a sort of supernatural Sir John Sebright (!)—to produce even the animal frame of man: while Mr. Mivart requires no Divine assistance till he comes to man's soul." (p. 7.)

This may be deemed clever: but it is the cleverness of a jury lawyer, not of the scientific lecture-room. It is a scoff which reminds one of Cicero's remark upon Velleius, that "he had made up his mind to be an Epicurean before he had learned the doctrine." It is proved indeed that a man may be eminent in science without necessarily being a Christian: but the levity which shocks the general Christian sentiment by a fliprant comparison of the Creator to a mere pigeon-fancier or horse-breeder, is at least in very questionable taste.

Writers like Prof. Huxley may be as anxious as Lucretius to strike all intelligence out of the operations of nature, but they have not reached yet that point of moral hardihood to glory in, and not repudiate rather, the name of atheist.

Prof. Huxley sets out with the statement that Mr. Darwin's "Origin of Species" has, "in a dozen years, worked as complete a revolution in biological science as the *Principia* did in Astronomy," and applies to it an expression of Helmholtz, "an essentially new creative thought." He speaks of a "mixture of ignorance and insolence," and "abusive nonsense," with which Mr. Darwin was at first assailed, and contrasts the style of the article in the *Quarterly Review* for July, 1871, with that of another in the same *Review* which preceded it by just eleven years. We have read both those articles, and we are free to say that we can discover nothing in either of them to justify the application of such strong epithets. We found no "mixture of ignorance and insolence" and no "abusive nonsense;" and as for contrast, there is none but such as should arise from the legitimate advance in the state of science, and the increase in the number of ascertained facts in ten years' time. In point of fact the article of 1860 is the more complimentary to Mr. Darwin of the two, giving him the highest credit for his real contributions to natural history, as well as for genius and originality in the exposition of his new theory. And the arguments of that article against that theory, as an adequate account of the origin of species, are for the most part as valid as ever, and have not yet been refuted. Indeed, we can not discover so much "contrast" between the earlier and later papers referred to, as there is between the first and last editions of Mr. Darwin's own work. And Mr. Darwin himself has had the candor

to admit that the reasoning of his various critics has compelled him in many instances to modify his own conclusions, though, as we think we have elsewhere sufficiently shown, very little for the better. If the later "criticisms on Darwin," as Prof. Huxley says, show more "attention to those philosophical questions which underlie all physical science," Mr. Darwin himself, in his later editions, is less explicit in his demands upon our faith in that mythological feat by which a "swimming bear" was supposed capable of being "developed into something as monstrous as a whale."

As to Mr. Darwin's theory being "a new creative thought" (though its main element would rather seem to be antagonistic to all ideas of *creation* whatever) we have no wish to detract from the credit of original discovery or invention which may be due either to him or to Mr. Wallace. But if the originality consist in the maintenance of evolution by the specific theory of *natural selection*, we can not but agree with a writer in the *Edinburgh* for 1860, that it is only "the *homeopathic form*" of the transmutation hypotheses previously put forth by Lamarck, Demaillet and others. Lamarck believed in the transmutation of species by the operation of some "*impulse from within*," as modified by the influence of external circumstances upon the organization. All along through Mr. Darwin's works, for the explanation of many crucial phenomena not otherwise to be accounted for, we are referred to some *unknown cause*, residing in the *nature and constitution of the organism*; while natural selection presents the operation of those "*external circumstances*," in the "*struggle for existence*," which determine the "*survival of the fittest*."

Now, Mr. Mivart, as well as Mr. Darwin and Mr. Wallace, is an "*Evolutionist*." His only quarrel with

Mr. Darwin's theory is upon its claim to be an adequate and comprehensive account of evolution. He is not willing to regard all the operations of the universe as purely unmoral and unintelligent. Instead of talking about "unknown" causes or forces, and stopping there, he is for establishing a theory of evolution which shall be consistent with the natural and intuitive ideas of *Theism*; and he believes the facts of Nature point clearly in this direction: a belief in which we may safely agree with him, unless we are to distrust that logical apprehension of the relation of cause and effect which everywhere characterizes human nature and human intellect among the beings of this world. He puts forth a theory of evolution, which he calls "Derivative Creation," and which is "simply the Divine action by and through natural laws," as distinguished from the original "primary or absolute creation" of the elements of the world. Of this theory he says:

This view of evolution harmonizes well with theistic conceptions; not of course, that this harmony is brought forward as an argument in its favor generally, but it will have weight with those who are convinced that theism reposes upon solid grounds of reason as the rational view of the universe. To such, it may be observed that, thus conceived, the Divine action has that slight amount of resemblance to and that wide amount of divergence from, what human action would be, which might be expected *a priori*—might be expected, that is, from a being whose nature and aims are utterly beyond our power to imagine, however faintly, but whose truth and goodness are the fountain and source of our own conceptions of such qualities. (*Genesis of Species*, p. 254.)

He believes in an "eternal law" presiding over the actions of the entire organic world, and that this "conception of an internal innate force will ever remain necessary however much its subordinate processes and actions may become explicable;" moreover, that this internal force "is determined to action by the stimulus

of external conditions : " but that " these external influences equally with the internal ones are the results of one harmonious action underlying the whole of Nature, organic and inorganic, cosmical, physical, chemical, terrestrial, vital and social."

If any one should ask, how this differs from Mr. Darwin's view, Prof. Owen, in his work on the " Anatomy of Vertebrates," might supply the answer :

" Derivation " sees among the effects of the innate tendency to change irrespective of altered circumstances, a manifestation of creative power in the variety and beauty of the results ; and, in the ultimate forth-coming of a being susceptible of appreciating such beauty, evidence of the pre-ordinating of such relation of power to the appreciation. " Natural selection " acknowledges that if ornament or beauty, in itself, should be a purpose in creation, it would be absolutely fatal to it as an hypothesis. " Natural Selection " sees grandeur in the view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one. " Derivation " sees therein a narrow invocation of a special miracle and an unworthy limitation of creative power, the grandeur of which is manifested daily, hourly, in calling into life many forms, by conversion of physical and chemical into vital modes of force, under as many diversified conditions of the requisite elements to be so combined. (*Cited, Genesis of Species*, p. 255.)

Every one knows who has read the *Origin of Species*, that the " dogma of separate creations " is a sort of *bête noir* of Mr. Darwin's : and in one place he admits that the desire to overthrow that dogma had led him too far. (*Descent of Man*, Vol. I., p. 146.) Certain it is that Mr. Darwin treats the opponents of his exclusive theory of evolution by natural selection as advocates of the dogma of absolute separate creations. He says :

These authors seem no more startled at a miraculous act of creation than at an ordinary birth. But do they really believe that at innumerable periods in the earth's history certain elemental atoms have been commanded suddenly to flash into living tissues ? Do they believe that at each supposed act of creation one individual or many were produced ? etc. (*Origin*, p. 431.)

But derivative creation, in virtue of some innate law, or inherent tendency, does not imply any such thing as this. Even Dr. Asa Gray, in his remarks on Darwin in the *Atlantic Monthly*, twelve years ago, pointed out this fact, when he said :

Agreeing that plants and animals were produced by omnipotent fiat, does not exclude the idea of natural order and what we call *secondary causes*. The record of the fiat, "Let the earth bring forth grass, the herb yielding seed,"—"let the earth bring forth the living creature after his kind"—seems even to imply them.

Of course, we are at liberty to suspend our judgment as to the question whether any general system of evolution at all has been sufficiently made out from the facts and phenomena thus far observed. But there can be no mistaking the fact that evolution by derivative creations is a very different thing from evolution by natural selection: that the former is consistent with theism, while the latter is not. Mr. Darwin himself, we apprehend, recognizes this state of the case. In his work on "Animals and Plants under Domestication," he enters into a long metaphysical argument to prove that if an omniscient creator could have intentionally ordered the shape of fragments of rock for the builder, or the variations in animals for the breeder, then "the plasticity of organization, which leads to many *injurious* deviations of structure, as well as that *redundant* power of reproduction which inevitably leads to a struggle for existence, and as a consequence to the natural selection and survival of the fittest, must appear to us *superfluous laws of nature*." He says also :

If we give up the principle in one case—if we do not admit that the variations of the primeval dog were intentionally guided in order that the greyhound, for instance, that perfect image of symmetry and vigor, might be formed—no shadow of reason can be assigned for the belief that the variations, alike in nature, and the result of the same general laws, which have been the ground work

through natural selection of the formation of the most perfectly adapted animals in the world, man included, were intentionally and specially guided. However much we may wish it, we can hardly follow Prof. Asa Gray in his belief that "variation has been led along certain beneficial lines like a stream along definite and useful lines of irrigation." (*Cited in Genesis of Species*, p. 272.)

This is certainly conclusive as to Mr. Darwin's views of theism and teleology both. It is impossible metaphysically to separate the theory of evolution by natural selection from the old atheistic Lucretian doctrine of *chance*, which Cicero, even while he listened to it, and as his works show, thoroughly understood it, yet regarded with inexpressible abhorrence. Prof. Huxley himself, who regards teleology as unscientific, undoubtedly gives the correct construction of Darwinism in regard to this subject. He says:

If we apprehend the spirit of the "Origin of Species" rightly, nothing can be more entirely and absolutely opposed to Teleology, as it is commonly understood, than the Darwinian theory. According to teleology, each organism is like a rifle bullet fired straight at a mark; according to Darwin, organisms are like grape shot of which one hits something and the rest fall wide. For the teleologist an organism exists because it was made for the conditions in which it is found: for the Darwinian an organism exists because, out of the many of its kind, it is the only one which has been able to persist in the conditions in which it is found. Far from imagining that cats exist *in order* to catch mice well, Darwinism supposes that cats exist *because* they catch mice well—mousing being not the end, but the condition of their existence," &c. (*Lay "Sermons,"* p. 303.)

We do not propose here to follow Mr. Mivart in his masterly answer to Mr. Darwin's objections against the truth of any such supposition as that of the special guidance by an omniscient Creator in the various phenomena of organic beings; but we agree with him that the belief in such intelligent agency—in a God and Creator, does not repose upon physical phenomena, but

upon the "primary intuitions" of man. And as to "laws of nature appearing superfluous" under such a belief, a good naturalist, who is familiar with so many yet unexplained phenomena in the world, ought to be the last man to deny that such "appearance" may be only the effect of human ignorance. As to Mr. Darwin's question whether it can be supposed that an omniscient creator ordained sundry details, such as "variation" for certain limited purposes as they appear to us, Mr. Mivart makes the following profound reply:

The theist, though properly attributing to God what, for want of a better term, he calls "purpose" and "design," yet affirms that the limitations of human purposes and motives are by no means applicable to the Divine purposes. Out of many, say a thousand million reasons for the institution of the laws of the physical universe, some few are to a certain extent conceivable by us; and among these, the benefits, material and moral, accruing from them to men, and to each individual man in every circumstance of his life, play a certain, perhaps a very subordinate part. As Baden Powell observes, "How can we undertake to affirm, amid all the possibilities of things of which we confessedly know so little, that a thousand ends and purposes may not be answered, because we can trace none, or even imagine none, which seem to our short-sighted faculties to be answered in these particular arrangements?" (*Genesis of Species*, p. 276.)

It has already been seen that Mr. Wallace, as well as Mr. Mivart, has parted company with Mr. Darwin, in that he too believes in a system of evolution which is under the operation and guidance of a ruling Intelligence.

This is the head and front of their offending in the eyes of Prof. Huxley, and the occasion of the sarcastic passage we have already quoted.

Mr. Mivart believes that this theory of derivative creations covers and harmonizes all the facts that have heretofore been relied upon to sustain severally the teleological, typical and transmutationist conceptions of

the organic world, and he is naturally solicitous to prove, therefore, that there is nothing in the doctrine of evolution *per se*, to conflict with religion. This it is, which more than anything else, appears to arouse the ire of Prof. Huxley in the paper now under our notice. We declare that the tone and manner of Prof. Huxley in this paper, remind us irresistibly of a passage in Mr. Mivart's chapter on "Theology and Evolution," which, though it gives no evidence of any intended personal application, seems too well to fit some of these strong-worded defenders of Darwinianism:

Some individuals within this latter class, (*i. e.* of those who are "hostile to religion,") may not believe in the existence of God, but may yet abstain from publicly avowing this absence of belief, contenting themselves with denials of "creation" and "design," though these denials are really consequences of their attitude of mind respecting the most important and fundamental of all beliefs. (*Genesis of Species*, p. 260.)

If Prof. Huxley could have supposed that this passage was levelled directly at himself, he could hardly have been thereby provoked to show greater unfairness and discourtesy than he has in this reply to Mr. Darwin's critics. His direct appeal is to the *odium theologicum*. Referring to the assertion of Mr. Mivart that there is no necessary opposition between evolution and religion, he begins with the *brusque* demand:

But then what do they mean by this last much abused term? On this point the Quarterly Reviewer is silent. Mr. Mivart, on the contrary, is perfectly explicit, and the whole tenor of his remarks leaves no doubt that by religion he means theology; and by theology that particular variety of the great *Proteus*, which is expounded by the doctors of the Roman Catholic Church, and held by the members of that religious community, to be the sole form of absolute truth and of saving faith. (Page 8.)

He also professes himself greatly astonished to hear that any Christian writers of former times had shown

anything like a doctrine of "derivative creation" or "evolution"; and sets himself to analyze the evidence of any such fact, with the object, as he sarcastically declares, of being able "to put some Protestant Bibliolater to shame, by the bright example of Catholic freedom from the *trammels of verbal inspiration*." To show that evolution is not inconsistent with theology, Mr. Mivart had quoted such ancient and mediæval writers as St. Augustine, Thomas Aquinas, and the more modern Suarez; and had expressly declared his opinion that "the prevalence of this theory (of evolution) need alarm no one, for it is without any doubt, perfectly consistent with the strictest and most orthodox *Christian* theology." Prof. Huxley, in citing this passage, adds a footnote, to the effect "that Mr. Mivart employs the term "Christian" as if it were the equivalent of Catholic," —a statement the fairness and decency of which we leave all who have read Mr. Mivart's "*Genesis of Species*" to judge.

As lovers of science we must protest against such a tone and method of treatment as are involved in these statements of Prof. Huxley, as altogether unworthy of his cause, unless, indeed, his cause be that of atheism: and, in fact, we are not disposed to be so charitable toward the Darwinian form of evolution in respect to its bearing on religion, as Mr. Mivart is himself, while he does not accept it. Prof. Huxley seems to object to confounding "religion" with "theology"; but if *theology* begins with recognizing the existence and government of a God, we must decline to accept from Prof. Huxley any *religion* that denies these two first principles of theology. His animus toward what he calls the "great Proteus" is not to be mistaken: and it does appear that he would not abstain even from the low artifice of seeking the applause of "Protestant Bibliolaters,"

by an assault on "that particular variety" of it which Mr. Mivart professes to hold as a *Roman Catholic*,—a fact we should have never discovered from Mr. Mivart's book, since he refers only to those truths or doctrines which are believed by all Christians alike. And to class St. Augustine, St. Basil and Thomas Aquinas with any modern party or school on the question of church organization, is very much as if one sought to get up a special claim to Shakspeare, or a prejudice against him either, on the ground that he happened to belong to the national church of the country in which he was born !

But we must ask Prof. Huxley, *cui bono?* To be sure, the question has but little to do with physical science itself, but if Mr. Mivart desires to assure the outside world which has no time for judging the merits of these matters, that there is no insuperable conflict between evolution (even Prof. Huxley's form of it) and the Christian religion, what is there in such an amiable wish to exasperate Prof. Huxley's sense of truth and propriety? Does the reference to the metaphysical speculations (not doctrines) of early Christian writers as to the cosmogony, seem to interfere with the boast that this new theory of evolution is "a new *creative thought*" of Mr. Darwin's own brain? If so, Prof. Huxley is too easily alarmed for the laurels of the "mutual admiration society" of modern English scientists; though he ought not certainly to be jealous of *any* theory of evolution which, like that of Mr. Mivart's at least, promises to commend itself to those who believe that there are more things in heaven and earth than are dreamed of in the philosophy of Mr. Darwin and Prof. Huxley.

It might indeed be said further, that Prof. Huxley more than suggests an ulterior object, of which he hardly leaves us in doubt, from the language he uses in

regard to the Christian Scriptures. He at least, is no "Bibliolater." But before he sets up as theologian, he ought to have told us what he means by the "trammels of *verbal inspiration*." He speaks of the "preposterous fable respecting the fabrication of woman," and says the IVth commandment, read in churches, states a *falsity* in regard to the creation, and not only that, but what Christians "are bound to know to be falsities," or if they use the words in some non-natural sense [*i. e.*, the word *day* for a long *period*,] they fall below the moral standard of the much abused Jesuit." And at the close of his examination of Mr. Mivart's "authorities," (in which all he makes out is that Suarez did not, after all, agree with St. Augustine, or follow him in full,) he sums up by saying that no man can be both a true son of the Church and a loyal soldier of science;" to which he adds such expressions as these, "that a hell of honest men will, to him, be more endurable than a paradise full of angelic shams": and whereas Mr. Mivart asserts that without a belief in a personal God, there is no religion worthy of the name," he rejoins, "that the worship of a personal God, *who, on Mr. Mivart's hypothesis, must have used language studiously calculated to deceive His creatures and worshippers is no religion worthy of the name.*" Let it be observed that he applies this semi-blasphemous language to an honest attempt to interpret the Scriptures in accordance with *any* theory of evolution, and is not willing to allow a Christian to understand by the "six days of creation" anything but the usual periods of twenty-four hours each.

Now all this is senseless objurgation, and utterly unworthy of science, though it *is* worthy of atheism. There is a painful air of petulance and juvenility about it,—of a zeal without ordinary discretion. There have

been theologians who insist upon the literal interpretation of the vision of creation in Genesis: (for the Bible begins with an Apocalypse as well as ends with one—both equally difficult to interpret, as both are beyond the reach of human observation, past or present,) while other theologians have reconciled Genesis and geology after the manner of Hugh Miller. Who gave Prof. Huxley the right to say, as his whole tone implies, that the Bible *can not be*, and *shall not* be at one with the actual demonstrations, we do not say the unproved speculations, of science? Will Prof. Huxley pretend to enlighten theologians by telling them that they must not see any symbolic language in the book of Revelation? He might as well do so as to presume to dictate their use of the word *day* in the account of the creation. Although his examination of Suarez, (he leaves alone the other authorities cited by Mr. Mivart,) exhibits his learning and cleverness pretty well, even if no other object were accomplished, yet his handling of this whole subject of theology, convinces us that even in "science" the old rule ought to hold good, *Ne sutor ultra crepidam.*

It was certainly a most senseless and unscientific procedure to take up a dispute with Mr. Mivart as to whether the thought of evolution had ever entered the mind of Christian writers of former ages. What more natural than that their speculations on cosmogony should have bordered on this as well as other theories, especially, when as we have shown before, something like the same thoughts had occurred to the greatest thinkers of Pagan antiquity before them? It is utterly aside from any practical purpose to review Prof. Huxley's examination of Suarez, for what does it signify to show that Suarez is disposed to be more *literal* on the question of creation than Augustine? And yet accord-

ing to his own showing, Suarez, like Mr. Mivart, "requires no divine assistance till he comes to man's soul," which he regards as the "substantial form" of man, proceeding in regard to the endless mutations of material bodies, upon the ancient principle "*ex nihilo nil fit*," which, after all, is only a doctrine of evolution. Whether Suarez himself actually applied the principle of the evolution of substantial forms to animals and plants, it is manifest that he held the principle. The passages which Mr. Mivart does quote from Augustine, Cornelius à Lapide, and Aquinas are directly to the point and prove what he designed to prove by them, as any one may see who will consult them in his chapter on "Theology and Evolution"—a chapter, which in our view, the most eminent philosopher of the age might be proud to have written. And if from any special interest, personal or scientific, Prof. Huxley feels bound to oppose the reconciliation of science and religion, he ought to be warned of what is portentously true, that the practical consequences of a mistake on his part to society and the world are a thousand fold more tremendous than any error in Mr. Mivart's views. The following words of the latter ought to be pondered by every student of science :

The Christian system is one which puts on the strain, as it were, *every* faculty of man's nature, and the intellect is not, (any more than we should *a priori* expect it to be,) exempted from taking part in the probationary trial. A *moral* element enters into the acceptance of that system. And so with natural religion—with those ideas of the supernatural, viz., God, creation, and morality, which are anterior to revelation and repose upon reason. Here, again, it evidently has not been the intention of the Creator to make the evidence of His existence so plain that its non-recognition would be the mark of intellectual incapacity. Conviction, as to theism, is not forced upon men as is the conviction of the existence of the sun at noonday. A moral element also enters here, and the

analogy there is in this respect between Christianity and theism speaks eloquently of their primary derivation from one common source. Thus we might expect that it would be a vain task to seek anywhere in nature for evidence of Divine action, such that no one could sanely deny it. God will not allow Himself to be caught at the bottom of any man's crucible, or yield Himself to the experiments of gross-minded and irreverent inquirers. The natural, like the supernatural revelation, appeals to the *whole* of man's mental nature and not to the reason alone. None, therefore, need feel disappointed that evidence of the direct action of the First Cause in merely natural phenomena ever eludes our grasp: for assuredly these same phenomena will ever remain fundamentally inexplicable by physical science alone. (*Genesis of Species*, p. 287.)

Professor Huxley lays down the principle that reason and morality can not have "two weights and two measures," and adds that the antagonism between theology and science is due to the fact that men of science can not "allow that the belief in a proposition, because *authority* tells you it is true, or because you wish to believe it—which is a high crime and misdemeanor when the subject-matter of reason is of one kind, becomes under the *alias* of 'faith' the greatest of all virtues, when the subject-matter of reason is of another kind." Now as to "two weights and measures," can Prof. Huxley deny that mathematical evidence, which leaves no place for will or choice or judgment, is a different thing from moral evidence, which calls into play the elements of spontaneity and responsibility in man's nature? It is impossible that the affairs of the world, the administration of law, justice, and government, should proceed only upon the same "weights and measures," without which we deny any real advance to physical science. In the conduct of life, humanity could not wait for indisputable conclusions of pure science: and if Prof. Huxley denies that probable or moral evidence supplies adequate motives for human conduct, he ought never to trust his life to the good faith of his

fellow men, as he does every time he sits down to his dinner, but he should carry the processes of his laboratory with him wherever he goes. All subjects do not admit the application of the same "weights and measures." It is not merely in physical science that questions occur, "the conditions of which," as Prof. Huxley himself remarked in a former defence of Mr. Darwin, "are not only exceedingly complex, but so far as the great majority of them are concerned, are necessarily beyond our cognizance." And a man who endorses Mr. Mill's declaration, "that there are multitudes of scientific inquiries in which the method of pure induction helps the investigator but a very little way," ought not to complain of or sneer at "two weights and measures" for science and theology, under the name of reason and "faith." As it is, Mr. Darwin's own books give the most conspicuous illustration of these two "weights and measures" indicated by Mr. Mill.

And as to the "Baal of *authority*, with all the good things his worshippers are promised in this world and the next," against which Prof. Huxley seems to cherish some groundless resentment, as if it really were opposed to the progress of science, we suppose there must be some "authority" somewhere, so long as all men have not arrived at the knowledge of all truth. Even "science" must in the nature of things, come to the vast majority of mankind on "authority"—say the authority of Prof. Huxley and his illustrious compeers. Whether the world would have ever got on without the conception of some higher "authority" than that of the "social compact" or of human laws, is a question in which the interests of civilization itself are bound up. Does Prof. Huxley believe that the civil penalties against perjury have had or have now in society any effect at all comparable to that of the *religious* sanction of an oath?

And yet respect to the obligation of an oath, is that upon which the most secular forms of government are obliged to rely, to make government itself practicable.

The question of "authority," however, resolves itself at last into the question whether there is a God, and whether it is morally probable and historically true, that a revelation of Him and His will has been made to the human race. Under atheism, of course there is no "authority," and no law but the chances of Natural Selection, by which all *Right* is but the *Might* of the stronger.

But it is time to have got quit of this "theological" discussion which Prof. Huxley bestows so much attention upon, as if it were a matter of vital importance to show that Christian writers of former times had *not* dreamed of evolution as a possible discovery of science, or that such a theory is reconcilable with Christianity as it has come down to us. For our part, we do not admire his taste, or his apparent object in so far travelling out of the legitimate province which a scientific advocate of any theory of evolution is strictly called to fulfil.

In coming to the psychological criticisms on Darwin's theory, Prof. Huxley falls foul of the *London Quarterly's* analysis of the intellectual powers,* under the two-fold classification of Presentative, or instinctive faculties, and Representative, or reflective faculties. He finds fault with it because it omits to give an account of the sensibilities and the will, when it simply professes to be a formula of the intellectual faculties. He objects to "drawing a hard and fast line" between

* This, in a previous article of this series, was by a typographical error, credited to a number of the *Edinburgh* of the same date, (July, 1871.)

thought and sensation, and says "that faint reproduction of a sensation which we call the memory of it, is properly termed a thought." This is a mere playing upon words, by which any kind of impression upon the mind,—perhaps even the mere reflex action of the nervous system, like an infant's seeking its mother's breast, might be put on a par with the elaborate reasoning processes by which Prof. Huxley would establish some proposition of natural science. Sensation certainly is not thought, however it supplies objects of thought to a mind previously capable of thinking in the proper sense of that word, as distinguished from mere feeling. A man may allow himself to be guided by mere sensation, and the association or memory of sensations, and thus assimilate himself to the brute: but that he *possesses* faculties different in kind as well as degree from those of the brutes, is what every system that deserves the name of a philosophy among men has always recognized. We are not concerned to adopt or reject the analysis of the *Quarterly Reviewer* in all its details, but the general outline of his classification into presentative or "indeliberate" faculties on the one hand, and the reflective or rational faculties on the other, is by no means new or peculiar. Sir William Hamilton makes the two highest elements of the human mind to be, 1st, the *Discursive* or elaborative faculty, which performs the work of generalization or comparison, and which corresponds to the $\Delta\tau\alpha\nu\alpha$ of the Greek, or *thought*, properly so called; and 2d, the *Regulative* faculty or reason, which corresponds to the Greek $\text{Ν}\omega\tilde{\nu}\varsigma$, intellect or common sense. Under this last head comes what is called by others Intuition or Insight, which is not so much a *faculty* of reason, as a *light* without which no exercise of reason is possible, or as Sir William Hamilton calls it, "the complement of the fundamental principles or laws of

thought"—a complement of *à priori* native cognitions, under which our knowledge *à posteriori* is possible. It is these elements which have nothing, so far as we can discover, corresponding to them in the brute creation. And if the *Quarterly Reviewer* is correct in showing this difference *in kind* as regards powers of intellect, *à fortiori* the argument will dispose of the question of moral obligations, emotions, sense of right and wrong, of the supernatural, &c.

Two things ought to be remembered in this controversy: 1st, that the mental operations of brutes is not a subject that can come within the sphere of human consciousness at all, and therefore can not be spoken of with the same certainty as that with which we analyze the phenomena of the human mind; and, 2d, that the *onus probandi* lies with those who assert that our mental faculties are but the developed instincts of ants and bees. We can not be called upon to *prove* a negative hypothesis: but to go at the subject of psychology from the side of natural history alone seems about as unlikely a way to prove the Darwinian account of the origin of intellect as it would be to try to explain the mysteries of palaeontology by the aid of inorganic chemistry alone. Even Mr. Darwin admits this difference between man and the lower animals, that man has to *learn* his work by practice, even such things as the lower animals do from the start instinctively and without conscious intelligence; but he assumes that the development *into* conscious intelligence is the result of "variations" arising from "unknown causes acting on the cerebral organization." We have no objection to the confession of ignorance implied in resorting to the expression, "unknown causes," but of the positive part of this statement there is not a vestige of proof.

Prof. Huxley gets up a comparison between the pro-

cesses that take place respectively in the minds of a gamekeeper and a hound in leash when a hare crosses the field of vision, and attempts to show that they are identical. He says: "In the dog there can be no doubt that the nervous matter which lies between the retina and the muscles undergoes a series of changes, precisely analogous to those which in the man, give rise to sensation, a train of thought and volition." He insists that if the processes in the man are accompanied by consciousness, those in the dog must be so too. He believes the only alternative to this is, with Descartes, to consider all animals unconscious machines. But is this the only alternative? If Prof. Huxley's notion of an identical *neurosis* and *psychosis* in dog and man is correct, then there is no such thing as *instinct*, and there can be no such thing as automatic actions, properly speaking. We would ask Prof. Huxley whether, supposing neither the dog nor man had ever seen a hare before, the *neurosis* in the two being the same, the *psychosis* might not be entirely different? It is a fact not to be got over in this way, that these actions of animals are performed in the same way from the first, (it would be absurd to maintain that animal *training* by mere association is the same as *education* of the intellect in man,) and that they are performed without regard to those considerations of purpose, consequences, time, place and circumstance which pass through the mind of man in connection with an action. Why does a beaver try to build its dam when confined in a dry courtyard? The phenomenon is perfectly familiar to us of various animals endeavoring to perform instinctive actions in circumstances of ludicrous impossibility. Instinct need not be a mere matter of mechanism, but it certainly must be an innate law of action working by inherited impulse, and not a matter of acquisition or educability at

all. As such it differs essentially from the intelligence of man. If instinct be only a form of intelligence, it would be in many cases far superior, *quoad* intelligence, to the intelligence of man. In fact the perfection of animal instinct, as compared with the tentative efforts of human intelligence *toward an ideal*, presents very much such a contrast as a bee's string does to a cambric needle under the microscope. There is certainly no evidence of self-consciousness in brutes, or the power of reflecting upon and analyzing their sensations, what they are and why they are, of drawing general inferences and predicating universal abstract propositions. They have consciousness, so far as sense perception implies consciousness, but it is only the consciousness of sensation. As Prof. Haven remarks, "the brute feels and acts; man feels, *thinks*, and acts." And feeling alone no more involves or requires intelligence, or the operations of intellect, than instinct does. And as to memory, it can not be proved that brutes *retain* images and sensations, but only that they *recognize* them when re-presented, which is a different thing. How can Prof. Huxley know that they can of themselves recall things that are absent, or sensations that are past? One may see how far short he falls of the *differentia* of real intellectual operation by his remark :

If a machine produces the *effects* of reason, I see no more ground for denying to it the reasoning power, because it is unconscious, than I see for refusing to Mr. Babbage's engine the title of a *calculating* machine, on the same grounds. (Page 34.)

This is mere sophistic, rhetorical *accommodation* of words. He would doubtless say also that the idiot boy who displayed a marvelous power of summing up numbers, ought to be called a mathematician, though he could not tell how he did it. But the fact is, the idea of an *unconscious* intelligent agent is positively un-

thinkable: and Mr. Darwin's attempt to reduce the spontaneous activities of thinking, reasoning beings to the category of blind physical law or impulse is but an attempt to eliminate all intelligence, according to any possible conception of it, out of the universe altogether.

As is well known from his views of the "Physical Basis of Life," Prof. Huxley believes that "our thoughts are the expression of molecular changes in that matter of life which is the source of our other vital phenomena." In answer to the criticisms of Mr. Wallace and Prof. Tyndal upon this view, referred to in one of our previous articles, he now says that though there is evidence of some correlation between mechanical motion and consciousness, he does not pretend that the nature of that correlation is known or can be conceived, and then adds:

Mr. Wallace presumably believes in that correlation of phenomena which we call cause and effect as firmly as I do. But if he has ever been able to form the faintest notion how a cause gives rise to its effect, all I can say is, that I envy him. . . . In ultimate analysis, everything is incomprehensible, and the whole object of science is simply to reduce the fundamental incomprehensibilities to the smallest possible number. (Page 38.)

This number can never become very small then, for what can have a wider range than "that correlation of phenomena which we call cause and effect"? This is a good deal like giving up the question. Suppose it shown that every state of consciousness—every thought and feeling of the mind—is accompanied uniformly by certain molecular changes in the nervous matter, by what logical right does he call the one the "expression" of the other, or compare their relation to the process which goes on in an electric battery? As Prof. Tyndal says, anticipating this sleight of rhetoric, "the cases differ in this, that the passage from the current to the

needle, if not demonstrable, is thinkable, and that we entertain no doubt as to the final mechanical solution of the problem: but the passage from the physics of the brain to the corresponding facts of consciousness is unthinkable." Prof. Huxley ignores this distinction altogether, and merely repeats the old materialist fancy so effectually exploded by Prof. Tyndal. "The utmost he can affirm," to use Prof. Tyndal's language again, "is the *association* of two classes of phenomena of whose real bond of union he is in absolute ignorance."

But, after all, even on the spiritual theory of the existence of the soul as a separate entity, can Prof. Huxley show that there should not have been precisely this association of two classes of phenomena, physical and psychological: if the reasonable soul was joined to a material body for a habitation in this world, and for normal relations with it? Though these speculations must ever carry us out of our depth, it would seem that this correlation of physical processes to consciousness is what *ought to have been*, under this theory, and in no manner militates against the essential existence of the human soul itself.

Nothing can show the superficial character of Prof. Huxley's metaphysics better than the following passage, in which the distinctive nature of the *reason* of man, as distinguishing him from the lower animals, is treated merely with a *bon mot*:

If man is not to be considered a reasoning being, unless he asks what his sensations and perceptions are and why they are, what is a Hottentot, an Australian black fellow, or what the "swinked hedger" of an ordinary agricultural district? Nay, what becomes of an average country squire or parson? How many of these worthy persons who, as their wont is, read the *Quarterly Review*, would do other than stand agape, if you asked him whether he had ever reflected what his sensations and perceptions are, and why they are?

The gift of language alone, inconceivable apart from reason, puts the Hottentot, as a reasoning being, at an infinite remove from the highest animal, not as a matter of *degree* or distance merely, but of kind and nature. Prof. Huxley's logic would be, that a parrot has the rudimentary gift of language, because it can articulate; just as the *calculating* machine "produces the *effects* of reason." But can not a child see that language implies the power, even in the Australian black fellow, of reflecting upon his perceptions, comparing them, conveying them to others, judging of them, and acting upon them, as no voiceless brute ever could do? These lowest specimens of humanity *do* reflect upon their sensations, and do seek for *causes* as no animal does. Besides, they have all the faculties we have, whether they use them or not, and even if they have no use for them—a fact which completely overthrows the whole theory of natural selection as applied to man. The "swinked hedger" can be developed into a Gladstone, and the Hottentot into a Bishop of Sierra Leone. If there is no difference in kind between instinct and intelligence, why in all these ages, nay, why in the life of a single ape, could there not be the development of some rudiments of language in the highest of the animals below man? It certainly is not because of undeveloped principles in them—it is because the essential principle is *not there to be developed*: that is, the Thought and Reasoning faculty of man. Prof. Huxley's gird at the old conservative *Quarterly* and its readers, ought in fairness to have been distributed; for he must have seen in the *Edinburgh*, of the same date, an article which in some respects is stronger than that in the *Quarterly*. It declares that "to interpret the mental processes of lower animals by our own standard, is to be guilty of an anthropomorphism quite as great as that which the mate-

rialists lay to the account of theologians;" that "if our intellect and moral sense be mere developments of certain elements in the lower animals by natural selection, man is merely a superior sort of brute, the great Ruler of the world a mere shadow of ourselves projected by our imagination, and our morality a mere instinct of the same order as that which rules the actions of the worker-bee;" and that though Mr. Darwin states that his argument does not touch the question of the existence of a God, yet "it completely destroys the objective value of any idea which we can form of Him, and this practically amounts to the same thing." Perhaps it is because Prof. Huxley substantially and *con amore* agrees with this "theological" aspect of the question, that he does not care to controvert it. If we conceive that the brute creation has no conception of any relation to God, that to it God is an unknown and unknowable thing, it is precisely that condition to which materialism proposes to reduce the human mind. The writer in the *Edinburgh* discusses Mr. Darwin's theory of language and of sexual selection rather more incisively than the *Quarterly*: and he sums up his consideration of the non-physical characters of humanity with the remark :

To measure man's superiority over the brute by his bodily frame is the only method by which a naturalist can construct his system: but to proceed to say that there is a corresponding identity of mental character between man and brute is to refuse to acknowledge facts in psychology which are as well ascertained as any of those in natural history. Till Mr. Darwin can show that the higher faculties of the human mind, such as the power of abstract thought and of forming general ideas, are merely developed from rudiments in the brutes by natural selection, his conclusion that the human mind is the same in kind with that in the brutes, is a mere assertion without proof. To discuss the problem with these important factors left out, is to play Hamlet with the character of Hamlet left out. (*Ed. Rev.*, July, 1871.)

This reminds us that Prof. Huxley has gone further and faster than Mr. Darwin himself. The above paragraph refers to the fact that Mr. Darwin declines to discuss metaphysically the higher intellectual faculties of man, such as self-consciousness, abstraction and the comprehension of universals, though he believes them the result of a high development of mental powers, leaving us to get what definite idea we may out of this vague language; and the reason he gives for not discussing them is that "hardly two authors agree in their definitions." Mr. Darwin did not consider that this omission was fatal to the value of his argument, but Prof. Huxley sees the necessity of reconciling the novel hypothesis with the accepted views and ascertained facts of psychology. And how, after all, has he helped his friend in this matter? By dragging him down to the sorry refuge of the baldest materialism. By assuming that all "*psychosis*" is but the result of correlated "*neurosis*," that mental action is only molecular change, even as motion and heat are convertible, or as the chemistry of an electric battery gives rise to the phenomena of light and sensation in the retina of the eye. Ought we not to be thankful to him for his forbearance in the following sentence?—"Whether we shall ever be able to express consciousness in *foot-pounds*, or not, is more than I will venture to say." But when driven into a corner and challenged to show or prove the passage or fact of passage from the physical to the non-physical, he defiantly turns upon us with a declaration of the inscrutability of the real relation of cause and effect in general, and of the incomprehensibility of any phenomenon whatever in its ultimate analysis. The question then is, whether, by his new theory, he has not multiplied incomprehensibilities instead of diminishing them—whether, in fact, by his own confession his whole sys-

tem of physico-metaphysics is not turned into a mere castle-in-the-air? At any rate, until he can give us something like proof—something at least that does not contradict all previously recognized laws of thought, we shall be content to apply to this subject the dictum of Prof. Tait, before cited,* that “the assertion that not merely life but even volition and consciousness are mere physical manifestations, is an error into which it is not possible for a genuine scientific man to fall, so long at least as he retains his reason.” That Prof. Huxley has now fallen into it, and wilfully ranges himself in the category of those who make that assertion, we think must be evident to his most earnest admirers.†

So far then as regards the intellectual powers of man. If Prof. Huxley and the Darwinian theory fail here, much more must they fail when we come to the still higher department of man’s nature, the moral or spiritual. For intellect is not the best part of man, even though natural science has little nourishment for any

* *Jour.* for October, 1871, Art. No. 1, page 22.

† Since the above was written, we have casually met with the clear and excellent work of Dr. Noah Porter, of Yale College, on “The Human Intellect.” His summing up on this very point is so conclusive that we subjoin it here, in his own words:

The argument of the Materialist stands thus: Certain psychical states or processes require as their condition certain organic bodily affections. Those bodily affections, however, are totally unlike the mental state which they conditionate. In every case in which they do occur they present new objects of apprehension and feeling. By these, and by these only, the soul receives its knowledge of the material world. Certain other mental states, far more numerous and far more important, are attended by no affections of the body whatever. Which then is more philosophical, to assume that such organic changes do occur when we can not trace their presence, nor any appearance of the organ in which they might be traced, or to which they might be referred, because, forsooth, they do occur when we can trace them and can give the reason for their occurrence; and then, with the aid of this unauthorized assumption, to infer that the soul and body are one organism;—or to disbelieve that such bodily changes do occur as the condition of mental activity, when we have no evidence from observation and no presumption from analogy?

other. Our intellectual superiority is a glorious thing, but it is compatible with the life of a brute. Taking this alone, *a priori* there might be some plausibility in developing it out of the accurate instincts of lower animals, so independent is it of the will and other moral qualities of man. It might be even a splendid intellect that should seek to reduce man to a mere category of the brute creation. The education of intellect alone nowhere touches what we call the *heart*, or moral nature of man, which supplies all his motive power, which carries the *whole* man with it, intellect and all, and “out of which are the issues of life.”

Prof. Huxley objects to the elementary distinction between formal and material morality, dwelt upon by Mr. Mivart, and says that “the adoption of any such principle is the denial of all moral value to sympathy and affection.” That is, we suppose, to maintain that an act to be *moral*, must proceed from a *conscious will*, would cut him off from attaching the moral quality to the affection of a bird for its young, or of a dog for his master. This is the gulf to be bridged, and Mr. Mivart simply breaks down the bridge. And Prof. Huxley we find now actually advocating the absurdity of unconscious moral acts! This goes far beyond the *opus operatum* theory of virtue or grace supposed to be held by that school of theologians against which Prof. Huxley in the outset sought to excite prejudice. Mr. Mivart is the one that is found to vindicate the popular religious and ethical axiom, that there is no *moral* quality in any act where there is no conscious will directed toward the fulfilment of duty. Prof. Huxley says that, “if mankind ever generally accept and act upon Mr. Mivart’s axiom, they will simply become a set of most unendurable prigs.” This would certainly be disagreeable and inconvenient. But it is quite important to know what

true morality is. What he and Mr. Carlyle seem to describe as unconscious morality, is really nothing more or less than the character of *habitual* goodness. Will Prof. Huxley say that the movement of the fingers of a practised player upon a piano is, in the proper sense of the words, either unconscious, or automatic? A life *trained* to virtue, from the love of virtue, may often show what looks like unconscious moral action: but after all, does not the will act as rapidly and unobservably as either the intellect, or if you please, the reflex action of the nervous system? Unconscious moral action is simply a contradiction in terms. Mr. Mivart said that "there is no trace in brutes of any actions simulating morality which are not explicable by the fear of punishment, by the hope of pleasure, or by personal affection." To this Prof. Huxley replies:

But it may be affirmed, with equal truth, that there is no trace in men of any actions which are not traceable to the same motives (!) If a man does anything, he does it either because he fears to be punished if he does not do it, or because he hopes to obtain pleasure by doing it, or because he gratifies his affections by doing it. (p. 41.)

Here he takes leave, indeed, of his "unconscious morality," but throws us into a maze of bewilderment at the incredibly low standard which he says is sufficient to comprehend all human action. Plato, Kant, Coleridge have all written in vain! Here is the moral outcome of materialism. If Mr. Mivart says that according to the Darwinian theory, "virtue is a mere kind of *retrieving*," Prof. Huxley goes to work to defend and justify the comparison in the same sense that "sculpture is a mere way of stone-cutting." But with all this logomachy it is not possible for Prof. Huxley in this way to reduce the trained habitual character of an educated moral agent to a level with the blind, uncon-

scious instinct of an unreasoning animal: even though he brings to his aid the hereditary transmission of many qualities of character in men. It is part of the very differentia of man to recognize in himself these transmitted qualities, with all his animal appetites and passions, (which no mere animal ever does,) and a part of his moral probation to act accordingly.

To Mr. Wallace's objections to Darwin's "Descent of Man," Prof. Huxley gives briefer and still less satisfactory attention. The crucial point of the large size of brain in the lowest savages as compared with that of the highest apes, he disposes of in a manner bordering on flippancy. He makes out a formidable account of what savages are compelled to know and do, in order to exist in savage life, which contrasts rather strongly with what he had supposed of their brute stolidity in regard to the power of *reflecting* upon their own sensations, in which respect he classed them with the "swinked hedger" and "average country squire or parson." He now says:

In complexity and difficulty I should say that the intellectual labor of a good hunter or warrior considerably exceeds that of an ordinary Englishman. The civil service Examiners are held in great terror by young Englishmen: but even their ferocity never tempted them to require a candidate to possess such a knowledge of a parish as Mr. Wallace justly points out savages may possess of an area a hundred miles, or more, in diameter. (Page 46.)

Now this means, if it means anything, that savages have use for all the brain with which they are endowed, which is an absurd statement. But how happens it, that if, as Prof. Huxley maintains in another place, they do not reflect upon their own perceptions, "what they are and why they are," they have yet the faculties and capacities for doing this, when by his own showing, such faculties should be developed only by the "selective influences" of civilization? This ques-

tion he does not answer. But he goes further and tries to qualify the fact that intellectual faculties are proportioned to the size of brain, by instancing the porpoise, and comparing wolf with dog. Does he mean to say that the brain of the savage being just like that of the civilized man is an exceptional phenomenon in nature: or does he mean to controvert the "correlation" of brain-power to mental superiority? As he does not carry out this argument, it is difficult to see what he does mean. He refers to the competitive or "selective" influences of civilized life "in favor of novelists, artists, and strong intellects of all kinds." To carry this out he ought to be able to show that "favorable variations" like Shakspeare, Goëthe, and Sir Walter Scott are transmitted by heredity!

We quite agree with Prof. Huxley that "the great need of the doctrine of evolution is a theory of variations," and it is our opinion that something definite of that kind is required to give even a decent foundation to the theory of Natural Selection. He now admits that "variation is *not* indefinite, nor does it take place in all directions, *because* it is limited by the general characters of the *type* to which the organism exhibiting the variation belongs." We question whether this admission is not at least dangerous to the whole superstructure of Mr. Darwin's system. For if variation *is* so limited, within a certain cycle around a definite *type*, as the *North British Reviewer* for 1867, (referred to in a former article) contended, then how does variation and selection account for the origin of *new types*, or species? Even this then is not *proved*; while, if it were proved, the labor of Sisyphus must still be undertaken to bring the whole nature of *man* within this theory of Hopeless Materialism.

IS INSANITY A DISEASE OF THE MIND, OR OF THE BODY?

The Dependence of Insanity on Physical Disease, by JOHN P. GRAY, M. D., Superintendent of the New York State Lunatic Asylum. [Read before the Medical Society of the State of New York, at its annual meeting, February 7, 1871.] *American Journal of Insanity*, April, 1871.

Materialism in its Relations to the Causes, Conditions and Treatment of Insanity, by H. B. WILBUR, M. D., Superintendent of the New York Asylum of Idiots. [A paper read before the Association of Superintendents of Insane Asylums, at the last annual meeting, at Toronto.] *Journal of Physiological Medicine*, January, 1872.

The papers here cited present two opposite views held by pathologists as to the nature, causes and treatment of insanity. On the one hand it is held to be a disease of the brain, originating in that organ or in other parts of the body, depending on physical causes, or on moral causes only so far as they are capable of producing physical effects, and to be treated by the same methods as other bodily diseases. On the other hand it is held to be a disease of the immaterial mind, depending for the most part directly on moral causes, and to be treated mainly by moral agencies. The object of this paper is to define as clearly as possible the views of these two schools of pathologists and discuss some of the problems involved.

I.

That a certain relation of mutual dependence exists between the mind and the brain is generally admitted by metaphysicians as well as by physiologists; but

while the former occupying themselves exclusively with the phenomena of consciousness lose sight of their dependence on the brain, the latter, engaged in the study of physical structure and material movements, lose sight of mind, and confound mental phenomena with cerebral movements. It becomes then of some importance to establish the distinction between these two kinds of phenomena, and to define the relation they bear to each other.

By means of the five senses we observe certain things and phenomena, which together make up the whole external world known to us. The study of these things, their description and classification, the analysis of these phenomena, and the determination of the laws regulating their order of succession, constitute the matter of physical science.

There are other phenomena which we do not find by the five senses, but by a faculty called consciousness, which we do not refer to the external world but to our own selves, as occurring in us. Thus, I know that I am now thinking on a certain subject and that certain thoughts succeed each other within me. How do I know this? I can not see nor hear myself think; though all my senses were abolished I might still think and know that I was thinking. I can only say that just as I hear and feel and see the things and phenomena around me, so I am conscious of thought, emotion and will within me. I am even more sure of this latter knowledge than of the former, for my senses have often deceived me, and I receive their testimony with some distrust; but when I am conscious that I feel or think or will, I am sure I am not mistaken. I may admit that my thoughts are erroneous, that my feelings are unworthy or my volitions criminal, yet it would be absurd for any one to try to convince me that I am not think-

ing, or feeling, or willing, when my consciousness tells me that I am.

Here then are facts of which we are most sure, which are not cognizable by the senses, but by consciousness; which are not movements or changes in the external world, but which occur within ourselves; and these facts may be observed, studied and reduced to a science. As out of the materials furnished by the senses, the physical sciences are constituted, so out of the facts of consciousness is constituted the science of Psychology.

The facts furnished by the senses have relation to the extended, moving thing we call matter, and so physical science is the science of matter. A fact of consciousness, such as thought, emotion or will, has no relation to extension nor figure, nor movement in space, nor any other material attribute, and hence we say it does not belong to matter, it is immaterial. As we name the substance having the attributes of extension and motion, *matter*, so we name the substance to which belong the attributes of thought, feeling and will, *mind*, and Psychology is the science of mind.

We have then these two great divisions of human knowledge, into Physical Science and Psychology.

If, having established this distinction, we stop short and consider these two divisions of science as having no relation to each other, we fall into a grave error, and form a very inadequate idea of Psychology. The phenomena of consciousness are connected with certain molecular movements of the brain, and dependent on them, and although these movements are not the phenomena of consciousness they are necessary factors in their production.

Physiology has demonstrated that mental phenomena are connected with molecular movements of the brain, so that during every thought, emotion or volition, move-

ments in the cerebral hemispheres parallel to these, but distinct from them, go on. A blow on the head may suspend these movements, and with them the accompanying mental operation; a torpid circulation through the cerebral capillaries, or a depraved condition of the blood, impedes them; disease of the brain perverts them. What is the exact nature of these material conditions accompanying mental phenomena? What is their exact seat in the hemispheres? Physiology gives as yet no satisfactory answer to these questions; it has only established the existence of these movements. When a man is angry or frightened, a molecular cerebral change occurs, which certainly is not anger or fright, but the necessary material condition of such emotions; and if the science of the physiologist were sufficiently advanced, and all the parts could be exposed to his observation, he might interpret this molecular movement, and know that anger or fright existed in the mind of the person; just as a telegraphic operator, hearing the click of his instrument, knows the message it is carrying.

The relation which the cerebral movement bears to consciousness, presents the most obscure and difficult subject of human speculation, and all efforts to form any adequate conception of it are vain. The progress of physiology may hereafter demonstrate more clearly the nature of the nervous movement, and the seat of it corresponding to various mental conditions; but whatever advance may be made in this direction, there must always remain between the physiological and the psychological phenomenon an immense gap which we can not fill, even with a plausible hypothesis.

As far as our experience goes, mind, in a state of activity, never exists without a living brain. As to the mode of existence of the soul after death, we can know nothing by experience, nor can we draw any deduction

by reasoning. The Christian Church teaches as a fundamental article of the creed, "the resurrection of the body;" and although different interpretations have been put on this, yet it seems, at least, to point to the continuance hereafter of some relation between the soul and body, like that now existing.

Some physiologists, occupied with the study of physical phenomena, using their senses more than their consciousness, see only the cerebral movements accompanying mental operations, and neglect the latter or confound them with the former. Thought, feeling, and will, are by them called functions, or products of the brain, just as secretion is a product of glands; and hence the existence of mind is denied, and psychology becomes for them only a chapter of physiology. These are called Materialists.

This view is weaker than that of those psychologists who overlook the action of the brain accompanying mental phenomena; for it is possible to construct a science out of the facts of consciousness alone, but it is not possible to take the first step in mental science, if we reject the data of consciousness. No possible study of the brain could suggest the idea of anger or fear, if we had never felt these emotions in our consciousness. We might learn the nervous movements accompanying them, but these are not anger or fear, any more than the click of the telegraph is the intelligence it transmits. When I read of thought or emotion as a secretion or product of the brain, the words convey to me no idea whatever. It is as though one should say that thought is a triangle. I can conceive of molecular movements of the brain as giving rise to other movements, or as generating products, having extension and mobility, in short, some form of matter; but thought is a phenomenon occurring in myself and not in my body; it is not a material

thing, nor has it the attributes of matter, it is not a product of the brain, though the brain may be necessary for its production.*

The preceding statement was necessary before entering on the main questions discussed in the papers, because their solution must depend on the views adopted of the relation of the mind and mental operations to the brain and cerebral movements. Dr. Gray advocates the views which have been here put forth, fortifying his position by extracts from writers on the subject, and expressly discarding the doctrine that the mind is a "mere result of cerebral action, and thus a material substance, a mere secretion liable to disease and death." It is to be regretted that Dr. Wilbur should have entitled his paper, which is mainly occupied in contesting the views of Dr. Gray, "Materialism in its Relations, &c.," as if the latter were a materialist; for this word is now deservedly odious, as representing a doctrine weak in science and unsound in morals. He does indeed say that Dr. Gray has avowed himself to be no materialist, but intimates that this avowal is not consistent with his pathology of insanity.

It is not easy from his paper to arrive at Dr. Wilbur's views on this point. He believes in the existence of mind as something apart from the body, and also in the reciprocal influence of the mind and body, but seems to confine this influence within very narrow limits.

*If we would speculate on this problem, which we can not solve, instead of considering the mind as a product of the brain, it may better be maintained that the brain is a product of the mind, which has formed this organ as a means of communicating with the external world, acting at first unconsciously as the plastic force presiding over the growth and development of the body, and when it has formed the nervous system, attaining to knowledge of the external world and to self-consciousness.

He says, page 42, as expressing his own views: "The brain was regarded as the organ of mind, the instrument through which the sensational basis of thought or mental action was received, one remove nearer the thinking ego than the nerves of sensation and the organ of mind in fulfilling its purposes; behind in course and action the nerves of voluntary motion. Like the other and subsidiary portions of the nervous system it is subject to the laws, conditions and effects of agency."

The meaning of this passage is not clear. In considering "*the brain as the instrument through which the sensational basis of thought and mental action is received*," he seems to hold that the brain is the organ by means of which the impressions made on the senses, "the sensational basis of thought," are transmitted to the mind, which then in comparison, judgment, memory, as well as the emotions, acts on the impressions thus received, and that all these mental operations founded on this "*sensational basis*," take place in the immaterial mind, without any cerebral action or movement. The mind also communicates its volition to the portion of the nervous system connected with the nerves of voluntary movement. In other words, that the mind is placed between the senses which put it in communication with the external world on the one hand and the organs of voluntary movement on the other, and that in all its intermediate intellectual and emotional actions, the brain has no part whatever. If this is the doctrine he holds, it leaves that large portion of the brain between the ganglia of sensation and the apparatus of voluntary movements entirely without functions; and yet this portion, embracing the whole of the cerebral hemispheres is developed in the proportion of the extent and activity of those same mental operations. It would be easy to show by citations that this view is opposed to

all the best teachings of modern physiology, and for that reason it would seem unfair to attribute it to Dr. Wilbur, if it were not that the passage occurs in a statement he makes of the greater soundness of the physiological views of the relation of mind to body formerly held, than of those prevailing within the last "twenty years." These peculiar physiological views are in general accordance with the rest of the paper, and furnish a key to the understanding of the "causes, conditions and treatment of insanity" adopted by him.

II.

Application of the Views to the Study of the Causes and Nature of Insanity.

In insanity the mental operations, intellectual, emotional and volitional are disturbed and perverted, and the question arises, does this perversion depend on a change in the entity called mind, or on a structural change in its instrument, the brain?

For those who maintain that the mental operations are only products of cerebral action, that the brain is the mind, no such question can arise. According to their view, a diseased brain gives rise to disordered mental phenomena just as a diseased kidney secretes morbid urine.

So on the other hand, those metaphysicians who shut their eyes to the relation of the mind to the brain, who consider the mental operations as produced by the activity of the entity called mind, without any dependence on the brain, necessarily see in insanity only a disease of the mind.

The question can only arise among those who admit a relation of inter-dependence between the mental operations and the brain. Among these there are some who maintain that although disease of the brain may induce mental derangement, yet that in a certain number of

cases, mental derangement exists without cerebral disease, or at least pre-exists to it, and constitutes the primary and essential element of the ailment; while others maintain that there is no such thing as disease of the immaterial entity called mind, and that in insanity there is always disease of the cerebral structure, and that the morbid mental manifestations depend on this disease.

It is impossible to establish by adequate scientific evidence either of these hypotheses, for neither is susceptible of direct demonstration, and both explain to a certain extent, the facts of insanity; but the strong tendency of opinion among pathologists is towards the adoption of the latter, as being more completely coincident with facts and more in analogy with physiological and psychological science.

We know that physical disease of the brain originating in itself or in other organs often does cause mental derangement. In meningitis or accidental violence, the delirium follows so manifestly the physical lesion that there can be no doubt as to which is cause and which is effect. The same may be said of those transient mental derangements caused by medicines or by temporary ill health. The dullness of mind during laborious digestion is plainly due to cerebral change caused by gastric irritation. In the mental torpor and derangement caused by the circulation of diseased blood through the brain, as in uræmia, anæmia and other diseases of this character, the same order of sequence is manifest.

All agree then, that morbid conditions of the brain may cause morbid mental phenomena; but while some hold with Dr. Gray that these material conditions are present in all cases of insanity, others hold with Dr. Wilbur that these material conditions are in many cases

absent, and that in those cases in which they are found, they are the consequences and not the causes of the insanity.

The cases in which no lesions are found after death in the brain of the insane, are now rare and may be considered exceptional. In proportion as the science of cerebral histology has advanced, and as the means of investigation by the microscope has become more extended, these exceptional cases have become more and more rare, and it may now be fairly concluded that the reason for their occurrence is to be sought in the still imperfect condition of our means of research, or in the want of due care. We may reason here as in the cases of sudden death, in which expert pathologists fail to find any lesion sufficient to account for death, and in which we attribute the failure to the imperfection of science, or want of sufficient care, rather than to a disorder of the vital principle apart from any physical lesions.

It is, however, maintained by those who hold insanity to be a purely mental disease, that even admitting the presence of cerebral lesions in the great majority of cases, or even in all cases of insanity, yet that these lesions are the results or concomitants, and not the causes, of the disordered mental operations.

It may be true that the perversion and violence of the mental operations of the insane give rise to cerebral disease, for this is the conclusion to which our physiological knowledge would lead us. If every mental act is accompanied by some corresponding molecular movement in the brain, it would follow that when these acts are intense and prolonged, the molecular movements will be of like energy, and may result in a permanent change of structure. As a gland, whose functional action is from any cause perverted or excessive, becomes

after a time changed in its structure, and then though the cause ceases to operate, this change of structure perpetuates the morbid functional action; so it is conceivable that the brain may become diseased by reason of mental excitement, and continue to exhibit morbid phenomena when the excitement ceases to operate. Thus we may understand how the ravings of an insane man may produce or aggravate disease of the brain, and while I can not admit that a man with a perfectly healthy brain can be insane, yet I would not maintain that a portion of the cerebral lesions found in the insane after death, may not be due to the insanity itself.

In the study of these phenomena we must keep constantly in view the inter-dependence of the brain and mental operations. Disease of the brain causes disordered mental acts, and these by their violence and irregularity cause disease of the brain, and thus the primary disease is extended and aggravated. Chronic gastritis causes indigestion, and this indigestion leaves the food to ferment in the stomach, aggravating by its presence the gastritis, and thus the consequences of the disease increase the disease. Doctor Gray has pointed out how different forms of insanity pass through dementia in their progress towards recovery. May it not be that the repose of dementia puts a stop to this action of disordered mind in extending and increasing the cerebral disease, leaving this disease to be overcome by natural processes, and acts like abstinence from food in gastritis, relieving the inflamed surface from the irritation of matters it no longer can digest?

Admitting then that mental excitement may influence the cerebral structure and cause disease, it remains to speak of the operation of moral causes in inducing insanity, on which Dr. Wilbur lays great stress. I think

he has herein misapprehended the position taken by Dr. Gray. I do not understand the latter to affirm that moral causes have no agency in the production of insanity, but rather that they cause insanity only by causing disease of the brain, and that their agency is not so important as has been supposed. He says, page 11:

"While experience shows that the morbid conditions of organs and tissues more frequently act on the brain than the converse, and thus disease of special organs, and general ill health from lowered vitality, precede and become the cause of the morbid state of the brain, ultimating in insanity; still there are cases where the general ill health and the insanity are due to an overworked brain, or the anxiety and prolonged tension and sleeplessness which are often the result of grief and pecuniary losses. Even here, however, the cause is physical, because insanity comes on only as a result of defective nutrition in the tissues, those of the brain included; the sleeplessness and deprivation of rest acting powerfully, not only against appetite and the simple ingestion of food, but also by wearying the nerve-tissues, and preventing ultimate cell nutrition. Thus some persons fail suddenly and rapidly, and die unexpectedly. We say these die of exhaustion. But they are not always emaciated, and thus exhausted. The brain gives way, fails in vital energy, and death ensues. Here the morbid action is not in the nature of shock,—of sudden arrest of heart-action by a sudden and powerful impression on the brain,—but of tension and wearing effort, steadily and powerfully depressing the vital energy."

The sequence of events is in this wise. A severe and overwhelming affliction falls upon some person previously sound in mind and body. At once the whole organism is disturbed, the mouth becomes dry and pasty, digestion ceases or is imperfect, the bowels are constipated or relaxed, the action of the heart is tumultuous, the eyes are suffused, and the patient has pain or sense of fullness in the head, with sleeplessness suggesting the intense molecular actions corresponding to the emotional excitement. If this state is prolonged, the

patient continuing to suffer, his health fails, and in time he may even die of it, remaining perfectly sane. If, however, from some hereditary or other predisposition together with the loss of vitality in the brain caused by the general disturbance, this latter organ becomes diseased, he then is insane. His insanity is then said to arise from a moral cause, and to a certain extent this is true; but it is not till the brain is involved that he is insane, and the occurrence of this brain disease depends not on the degree of mental excitement only, but on other conditions of which I will speak presently.

This may be illustrated by what occurs in other organs. An indigestible meal causes the usual symptoms of gastric irritation, which last till the stomach has got rid of the disturbing cause, and then all the symptoms cease, and the patient is again in health. But if this occurs repeatedly, the stomach becomes changed in structure, and the symptoms persist after the cause has ceased to operate. This persistent disease of the stomach is analogous to the cerebral disease caused by mental excitement, and which is permanent after the moral cause has ceased to exist; for though a removal of the moral cause relieves the distress of mind which precedes insanity, yet, when this latter condition has once been induced, such removal is of little avail.

A person engaged in speculation finds himself embarrassed, and has reason to think that he is reduced to poverty and ruin. This produces great distress of mind; but if his affairs turn out better than he expected so that he finds his fears were groundless, his anxiety is relieved, and his mind and body are again well. If, however, this mental condition had once induced such cerebral disease as to render him insane, an improvement in his affairs has no influence in restoring him to sanity. The reason is that the physical disease once

established runs its course in spite of the cessation of the moral cause.*

The difference between Dr. Gray and Dr. Wilbur is this: The former as we have seen does not deny the agency of moral causes in producing insanity, but maintains that such causes first induce disease of the brain or of the system generally, and ultimately of the brain, and that when such disease exists the mental operations are perverted or disordered, the patient is insane. Dr. Wilbur maintains that moral causes induce a change in the immaterial entity mind, by which independently of any cerebral disease, its actions are disordered and insanity exists.

If with Dr. Wilbur we regard the brain as only "the organ through which sensational basis of thought" is received, leaving all emotional and intellectual processes independent of the brain, then his view of the operation of moral causes is sufficiently plausible. On the other hand, if we adopt the physiological views advocated by Dr. Gray, and which are sustained by experimental and comparative physiology, holding that no emotional or intellectual act goes on without a cerebral movement, the dependence of insanity on physical disease follows as a natural consequence.

We now come to another point on which the Doctors differ, and that is in relation to the importance of moral causes in the production of insanity. Dr. Wilbur holds them to be primary and most frequent. Dr. Gray considers them secondary and comparatively unimportant.

* And this presents a fair illustration of the inefficacy of some forms of moral treatment of insanity. You may explain to this man when insane, that his apprehensions had been erroneous, that his affairs are in fact prosperous, and all this will avail nothing to his recovery. Only when the physical injury has been repaired by time and treatment will sanity return.

Pathologists have admitted a certain class of diseases, in which are included gout, scrofula, tuberculosis, cancer, insanity and others, which make their appearance at certain periods of life and which depend for their production, not on external conditions, but on certain innate peculiarities of constitution. If we would look for their cause, we must go back to the germ at the moment of fecundation, or even to conditions existing in the parents. This cause is of the same nature as that which determines the conformation of the body, the color of the hair, or the characteristic, intellectual, or moral peculiarities. These are called diseases of development.

Accordingly, we find that a person born of gouty parents, begins at a certain period of life to present symptoms of gout, coming on without any external cause, or if some cause favoring its production is present, it is plainly secondary—no modification of external conditions will altogether prevent the occurrence of the disease in one constitutionally subject to it, nor will any possible external conditions produce it in one not thus disposed.

Yet, from the common tendency to look for direct and palpable causes, the appearance of these diseases is commonly ascribed to accidental causes. A paroxysm of gout is ascribed to luxurious living, tubercular phthisis to exposure to cold, cancer to the inflammation following some bruise. In one sense these are real causes; but it ought to be understood that they would not produce the disease if the internal conditions were not previously present, and that the presence of these internal conditions would in many instances have produced the disease without the concurrence of those external causes.

Insanity is a disease of this class, and often appears

without any apparent cause. A person not exposed to any great anxieties or afflictions, whose affairs are prosperous, and whose general health has been good, begins to complain of general bad health, and soon after exhibits mental peculiarities which at first do not attract much attention. His family and friends are surprised and grieved at his conduct, but do not suspect the real character of the disease, which may continue in this stage for some time before it assumes the form of manifest insanity.

Beginning thus without any apparent cause, it after a time creates an apparent cause for itself, leading an inexperienced observer into error. I will illustrate what I mean by a typical example.

A cashier of a bank who had for years conducted his own affairs and those of the bank prudently and honestly, began to plunge into hazardous and desperate speculations, and in a short time brought himself and his bank to pecuniary ruin. All this, of course, brought on him disgrace and embarrassment, and after a time he began to exhibit manifest symptoms of mental derangement. He was sent to an asylum at which he died of general paresis.

In this case, the insanity was attributed by his friends to the mortification and distress caused by his disastrous operations, when in reality it was the cause and not the effect of these operations. Exaggerated notions of wealth, and an impulse to reckless speculations are symptoms of the early stage of this disease, which originated in an internal condition without external cause, physical or moral, and which gave rise to an apparent cause. A careless observer might have set this down as a case of insanity depending on a moral cause, distress, occasioned by loss of property and character.

This explains the case of many a bankrupt who has ended his life in an asylum, and of many a suicide who after losing property and character has put an end to his life before his insanity had been recognized. In many of the cases of insanity thus attributed to moral causes, it will be found on careful examination, that those supposed moral causes are themselves the effect of the insanity.

When some great excitement, political, religious, or speculative, pervades a community, a certain number of persons become insane on the subject of the excitement, and the insanity is then said to depend on this moral cause. The true sequence of events is this.

A religious revival, as it is called, exists in a certain community; meetings are held and frequented by persons interested in the movement, and the excitement of all increases the excitement of each one; discourses presenting terrific pictures of sin and its consequences are delivered, prayers are offered, cries are uttered driving this excitement to frenzy. This state of things continues for some days or weeks, and then subsides. The results are, that a large part of those who were the subjects of this excitement go back to their ordinary business forgetting all about it,—no trace has been left in their minds. A certain number calm down into a quiet religious life, and a few become insane. The latter are said to become insane because of religious excitement, when in truth they were just ready to become insane, and the prevailing excitement only started the disease and gave direction to it. Had a political revolution broken out at the time, it would probably have affected the same subjects, and given a different direction to their insane ideas.

In this way great excitements pass over a community, gathering up all the insane subjects, or those in whom

the insanity is just ready to break out; just as a high wind, passing over a forest, blows down all the rotten trees just ready to fall, and which in a short time would have fallen without it.

We may call these accidental external conditions, causes of insanity, if we will, just as we may call exposure to cold the cause of consumption, or a bruise of the breast the cause of cancer; but if we make this statement without explanation or qualification, it leads to unsound notions of the etiology and pathology of insanity. These are causes, as the pulling of the trigger is the cause of the discharge of the gun. It is indeed a cause, but what a number of conditions must exist in order to render this cause operative. These conditions are of more importance in explaining the explosion, than the slight cause which set them in movement; and so, it is of more importance to understand the preliminary physical condition which renders insanity possible, than the accidental cause which gives activity to this condition. The illustration here used fails in this, however, that while the gun would never have been discharged if no one had pulled the trigger, the man, having in himself the internal conditions of insanity, is exposed in ordinary life to so many exciting causes, that he could scarcely expect to escape for any length of time.

Shall we then say that men become insane by a sort of predestination, and that it is of no avail to avoid what are called moral causes? Most assuredly not. One disposed to tubercular disease, may, by choice of climate, nourishment, and other external conditions, escape the development of the disease, and live to an old age; and so, one who, from inheritance or other causes, has all the internal conditions of insanity, may, by a proper regimen and intellectual and moral discipline, escape an

outbreak of the disease. We certainly would not expose such a one to the excitement of Wall street, or the violent agitations of politics. This shows how unimportant is the part played by moral causes in the production of insanity.

It would be rash to attempt to answer positively the question whether a predisposition must always exist in order to give efficacy to the exciting causes of insanity. Some analogies presented by other diseases of that class, would point to an affirmative answer. We know that some become insane from very slight exciting causes, or even from no apparent cause, while others go through the most overwhelming afflictions of body and mind for many years without becoming insane, so that it would seem that some are incapable of becoming insane under any circumstances, and some have no chance of escaping it. Between these two classes are those who may escape by proper care, and these are the subjects for the skill of the psychological hygienist.

What has been said in regard to moral causes of insanity prepares us to appreciate the importance of what is called its moral treatment. Dr. Wilbur dwells on this as one of the points in which he differs from those who maintain that insanity is a physical disease, though a little examination will show that the difference is not such as he suspects. A judicious physician does not neglect moral influences in the treatment of any disease, and certainly they are not of less importance in mental derangement depending on cerebral lesion than in other forms of disease. No one disputes the good influence of a placid and hopeful condition of mind in a case of pneumonia or rheumatism or any other purely physical disease. Firmness and gentleness on the part of attendants, avoidance of all violence and excitement, such surroundings as may induce in the patient a cheerful and

placid temper, together with a healthy exercise of the moral and intellectual faculties are remedial and hygienic measures, which no wise physician would question or discard in the management of insanity, however much he might be convinced of the physical character of the disease. If we admit that insane thoughts and acts have a tendency to aggravate and extend the cerebral lesion, it is obvious that an important element of treatment is to allay the violence of the mental operations by soothing moral treatment. Indeed, it is worthy of remark, that the adoption of such treatment dates from the time that the insane began to be considered as subjects of physical disease and not victims of demoniacal possessions.

So far, then, there can be no dispute as to the necessity of moral treatment; it accords quite as well with the pathological views of Dr. Gray as with the views of Dr. Wilbur. But, if we attempt to operate directly on the mind of the insane by moral considerations we shall be greatly disappointed in the results. The importance of moral treatment lies in avoiding what is hurtful, but it is of little influence as a direct curative agent. How vain is the attempt to reason with the insane on the subject of their delusions, or to remove the gloom and despondency of melancholics by cheerful or diverting conversation is well understood.

This may be illustrated by what occurs in the experience and consciousness of most persons, in a condition, not of insanity, but presenting similar mental and physical elements.

Most persons know what it is to be in low spirits without any external cause to justify or explain the feeling. In this state of miserable despondency everything looks gloomy and threatening. The attempt of friends to cheer the subject of this sadness and appre-

hension, by showing how unreasonable it is, or by diversions and cheerful conversation, only excites a feeling of vexation and anger. Now, under such circumstances, the operation of a cholagogue purgative will often restore the sufferer at once to his accustomed humor and to moral and intellectual activity. The mental disturbance depended on the circulation through the brain of blood imperfectly depurated, and ceases at once when this fluid has been restored to its normal condition. All moral curative treatment failed while the physical cause continued, and became unnecessary when this cause was removed. This condition differs from melancholia in being of a slight and transient character, while the latter depends on a more deeply rooted and permanent physical lesion. Melancholics who have recovered, describe the passing away of their delusions and sadness as being like the dispersion of a cloud which had been hanging over them.

In this paper the attempt has been made to present fairly the spirit and matter of the views and arguments on both sides, without introducing extracts from the papers which have served as the text. Such extracts would have extended this paper to an unreasonable length, and were unnecessary for the reason that the papers under consideration are very generally in the hands of the readers of this JOURNAL.

T. H.

BIBLIOGRAPHICAL.

REVIEW OF ASYLUM REPORTS FOR 1871.

25. MASSACHUSETTS. *Report of the Taunton Lunatic Hospital:*
1871. Dr. W. W. GODDING.

There were remaining at date of last report 382 patients. Admitted since, 380. Total, 762. Discharged recovered, 113. Improved, 135. Unimproved, 89. Died, 43. Total, 380. Remaining under treatment, 382.

Two subjects of great practical importance have received attention in this report. We refer to the care of the criminal or convict insane, and inebriates. A few States have made separate provision for one or both of these classes, while others have the question still to answer, what shall be done with them? Several of the Superintendents of insane asylums are presenting the disadvantages of attempting the care of inebriates among the ordinary insane. The picture which the Doctor draws will be recognized as a faithful one by all who have had a like experience. We quote:

A patient of this class is brought to the hospital. In a few days, the stimulus being withdrawn, the reason clears; sleep and food restore the exhausted nervous system, and the man says he is well. His delusions, if any existed, are gone; his pulse is normal; his sleep is good; he reasons well on any topic,—on none clearer than on his unfortunate habit. It is true that repeated attacks sometimes leave the mind weak, but I am considering the ordinary case. Intellectually he is well, and you can detect only one thing lacking,—his moral sense; that, in confirmed cases, seems to have burnt out early. Theoretically you say the man is not well. I doubt not you can point out an undue irritability of the nerve centres, and I am not chemist enough to say that the carbon, hydrogen and oxygen that should go to the making up of the ultimate

molecules of his brain may not have there united in the proper equivalents to form alcohol ; but practically he has recovered from his insanity, and in a world where there was no rum he would remain well. So you can keep him or let him go. If you let him go, the chances are that he will drink again and be back in a month. If you keep him, which after one or two trials is perhaps the best thing that can be done, you will probably regret it. In a hospital, where labor can not be compulsory, he never elects to do anything ; a life of dissipation predisposes to a life of idleness, but to him the idleness without the dissipation is fearful. His freedom from obvious insanity seems to entitle him to a place among the most intelligent and comfortable patients ; he takes your best as being his right, and then abuses it ; he poisons the minds over which he has an influence, creating disaffection towards the hospital that detains him. Some slight advantage in education causes him to look down with contempt upon the poor lunatics, as he styles them ; he says that his case is not like theirs, that the hospital is no place for him. And I think he is right. It will be said that the absence of moral sense, to which allusion has been made, is the very evidence on which the man should be kept in the hospital. If disposed to argue the point, I should ask, how is it with the man addicted to profanity, whose oaths at last pour from his lips with hardly a consciousness of the words he utters,—must we call his absence of moral sense, moral insanity ? Criminal indulgence of all kinds at last passes the bounds of self-control, but we very properly hold the individual responsible for the course by which the end was attained. Exactly what view we may individually take of his case does not matter ; sane or insane, the confirmed inebriate should have special provision made for him by the laws.

A law upon the statute book of the State calls for the erection of an asylum for the convict insane.

This is a wise provision, but as it stands without enforcement, affords no aid to the various asylums of the State. We hope the superintendents of institutions and others occupying positions of influence who may be able to create a public opinion upon the subject, will not let this matter rest till all the convict insane are fully and properly cared for in an institution erected according to the act referred to.

Upon the subject of labor we quote :

To the overtasked brain, nothing is more health-giving than the contact of mother earth ; our patients go out and walk over, and work in, and lie down on it. Is their work profitable ? Well, when they weed in the garden they are liable to thin out the vegetables surprisingly ; when they hoe, I suppose they bury some tender plants beyond the hope of a resurrection ; but somehow, out in the sunshine, the cheek browns and reddens ; over his work the man grows calm ; out of all this the tangled web of the intellect clears itself again, so that when a patient begins to work, we begin to hope he will get well. Nor would it be right to convey the idea that our farming is a failure ; if our vegetables are a little late, they are none the less acceptable when they come. We get out of the land more than we put in it ; where we have removed the unsightly rock this year, the grass will grow green the next ; the rough places, once made smooth, remain so ; open up the long vistas of the woods, and their green aisles will always gladden you, for the years, as they steal away the charm from everything else, make the trees only more beautiful.

Improvements in the internal arrangements of the house and on the farm and grounds are going forward, which add to the beauty of the asylum, and increase the comfort and happiness of its inmates.

26. CONNECTICUT. *Sixth Annual Report of the Connecticut Hospital for the Insane.* Dr. A. M. SHEW.

There were remaining at date of last report 237 patients. Admitted since, 92. Total, 329. Discharged recovered, 17. Improved, 11. Unimproved, 24. Died, 15. Total, 67. Remaining under treatment, 262.

The same question as regards the treatment of the convict insane is now under consideration in this State. During the past year, eight of this class have been sent to the asylum. The same difficulties of preventing their escape, and the moral effects of their association with other patients is noticed here as elsewhere.

Fortunately, the Doctor is able to propose a ready solution of the question as to what shall be done with

them. He proposes at an expense of \$5,000, to fit up a stone building formerly used as a shop, in a manner every way appropriate for their care and safe custody. During the year work has been carried forward upon the new wing, and by January, 1873, it is thought accommodation would be furnished for 125 more women patients. An appropriation to erect a like wing for the men is strongly urged. Dr. Shew is laboring under the disadvantage of having inherited a large mass of chronic insanity.

At this date, out of 262 patients in the asylum, 242 are of the chronic class, and of only 20 can the idea of restoration be hopefully entertained. Of the water supply of the Institution, the Doctor speaks in terms expressing great satisfaction. "The quality of the water is unexceptionable, and in ordinary seasons of sufficient quantity to supply several institutions of this size."

The special Pathologist, Dr. Seguin has continued his labor, and this year presents a very complete report of a case of Paresis. This includes the history of the case, before and after admission, a very thorough examination of the person, with the diagnostic symptoms of the disease, the autopsy, and finally a very minute microscopical examination. We commend the thoroughness of this report.

27. NEW YORK. *Fifth Annual Report of the Hudson River State Hospital:* 1871. DR. J. M. CLEAVELAND.

The labor of construction has been continued through the year, and three sections are now opened for the care of patients. The fourth section on the men's side it is hoped, will be completed during the current year. In October last, the portion already completed was opened for the reception of patients. The superintendent re-

ports on the 30th of November that seven patients had been admitted. The managers report on the 11th of March, that there are 60 patients already received, and that the present capacity will soon be reached. Much of the report is occupied with details of building operations. The building of the reservoir and the putting in the power for raising the water, and laying pipes for conducting it from the river, occupied much attention during the past year. The Institution may well be envied by others less favored in regard to water supply; this is absolutely limitless. We are glad to be able to chronicle the opening of the Hudson River State Hospital for the Insane under such favorable auspices.

28. NEW YORK. *Report of the State Lunatic Asylum for Insane Criminals:* 1871. Dr. JAMES W. WILKIE.

There were remaining at date of last report 60 patients. Admitted since, 30. Total, 90. Discharged recovered, 6. Improved, 5. Unimproved, 3. Died, 2. Total, 16. Remaining, 74.

Dr. Wilkie reports the Asylum as being much crowded from the reception of patients sent under the law authorizing the transfer of insane criminals of both sexes, from the State institutions, or directly from the various counties upon the order of the Court. He has been obliged to vacate a whole ward for the use of five women patients, and in so doing to crowd seventy men patients into wards with accommodation for only forty-eight. To meet the demands upon the Institution, he calls for an appropriation of \$30,000 to enlarge the capacity of the Asylum. Of twenty patients received during the year from the prisons, nine were of unsound mind when they were admitted to prison. He remarks: "It would appear from the foregoing statement that the practice of sentencing men, innocent because not

accountable by reason of insanity, to our State prisons, is largely on the increase, and calls loudly for a remedy." Much has been done in making needed repairs and improvements, and the appropriation of \$1,000 made last year has been used with economy and benefit to the Asylum.

29. PENNSYLVANIA. *Fifty-fifth Annual Report of the Asylum for the Relief of Persons Deprived of the Use of their Reason: 1872.* Dr. J. H. WORTHINGTON.

There were in the Asylum at date of last report 62 patients. Admitted since, 24. Total, 86. Discharged recovered, 7. Improved, 10. Unimproved, 7. Died, 5. Total, 29. Remaining, 57.

During the year great changes and improvements have been made. A new Mansard roof has been placed over the whole building, giving eight additional rooms for employes, and new wards have been built to accommodate ten more patients, five of either sex. The windows have been cut down and new ones made in the rear walls of the buildings, thus greatly increasing the amount of light and cheerfulness of the wards. The Institution now compares favorably with others in the possession of all modern conveniences for the comfort and care of patients.

30. INDIANA. *Report of the Indiana Hospital for Insane: 1871.* Dr. ORPHEUS EVERETT.

There were at date of last report 475 patients. Admitted since, 338. Total, 813. Discharged recovered, 176. Improved, 30. Unimproved, 90. Died, 40. Total, 336. Remaining under treatment, 477.

The demands upon the Institution for admission have been far in excess of the capacity of the house. One hundred and thirteen, made officially, were refused. The

ninety cases discharged as unimproved were chronic cases sent away to make room for acute cases. The Institution has been crippled from the failure of the Legislature to make a special appropriation for improvements and repairs. However, a basement ward has been fitted up and made comfortable for the use of patients.

31. KENTUCKY. *Report of the Eastern Lunatic Asylum:* 1871.
Dr. JOHN W. WHITNEY.

There were at date of last report 525 patients. Admitted since, 142. Total, 667. Discharged recovered, 61. Removed, 24. Died, 45. Eloped, 1. Total, 737. Remaining, 536.

Dr. Whitney notices the subject of the proper care of the criminal insane, and recommends a separate addition to be made to the Asylum. He calls the attention of the Legislature to the project of a law in regard to this class adopted by the Association of Superintendents in 1868, and thinks its passage would prove beneficial. During the year the portions of the Institution destroyed by fire in September, 1870, have been rebuilt. The managers urge the increase of officers' salaries, the Superintendent's to \$3,000, First Assistant's to \$2,000, and Steward's to \$1,000.

32. MISSOURI. *Report of the St. Louis County Insane Asylum:* 1872. Dr. CHARLES W. STEVENS.

There were at date of last report 253 patients. Admitted since, 112. Total, 365. Discharged recovered, 16. Improved, 16. Unimproved, 22. Died, 12. Total, 66. Remaining, 299.

The methods of heating by steam, and lighting by gasoline, after continued use receive the Doctor's commendation. During the year much suffering has been experienced from the want of a water supply. For two months of the last winter a heavy expense was incur-

red for transporting water for the boilers and laundry from the nearest fire plug of the city, a distance of three miles. A connection will soon be made with a new city reservoir, which will obviate further trouble and anxiety. Applications for admission far exceed the capacity of the Asylum, and extensions to the building are urged.

The establishment of a "Board of Commissioners of Public Charities" is favorably commented upon. "If then, the gentlemen composing the Board conceive the true spirit of their official duties, their presence in all our asylums, hospitals and alms-houses will be hailed as ominous of good."

Report of the Institution for Feeble-Minded Youth: Barre, Mass.
1872. Dr. GEORGE BROWN.

There are about sixty children cared for in the Institution; some are pupils, some custodials, and others patients. The Doctor says: "Our first aim is the highest physical health attainable by each subject of our care." "With fresh air, sun-light, and nutritious food, we seek to build up the muscles, quicken the sluggish circulation, and furnish to the blood the red corpuscles so often lacking as to their proper quantity in these puny delicate children."

Upon the subject of epilepsy, Dr. Brown comments at some length. "For medical remedies in epilepsy, we have found bromide of potassium, in its various combinations more reliable in controlling the attacks than anything else. It is a great point gained to hold such a disease in check, preventing access of strength and increase as to frequency, even when a permanent cure may not be predicted."

From Rousseau he quotes: "I can not repeat to you too often that patience on the part alike of Doctor and

patient is the capital condition of success. A whole year is sometimes scarcely enough to make us acquainted with the influence of belladonna, and in the second year some amendment should appear: we should persevere for two, three, or four years, according to the rules which I have laid down, and so as to bring the nervous system under the influence of the remedy."

Seventh Annual Report of the Illinois Institution for Feeble-Minded Children: Jacksonville, 1872. Dr. C. T. WILBUR.

The success attending the operation of this Institution led the Legislature, after the close of its sixth year of experimental labor, to incorporate it as a State institution.

During the year 86 pupils have been under instruction; 30 have been received and 15 removed. There are 71 pupils now present. We quote from the Doctor's reprint some remarks upon the object and aim of the Institution.

Many are not familiar with the design of the Institution for Feeble-Minded Children. The object and aim of an institution for this class of children is: the improvement of the general health, by physical training, exercise, bathing and all other suitable appliances, with such use of medicines as may be beneficial; the awakening, regulation and development of the mental powers, by those means peculiarly adapted to this class, which have already been found so effectual in similar institutions; the employment of those educational resources which have been systematically developed in similar institutions, with as much modification and extension as may be necessary to meet the peculiarities of pupils; in the cases of the best class of pupils, the providing of some suitable occupation, giving healthy employment, at once agreeable and profitable, to all their powers, especially keeping in view such occupations as may fit the pupils for future usefulness and intercourse with society. Among the first lessons are those designed to teach them to take care of themselves, as far as possible, in all personal matters. As a general rule, judicious physical exercise is the basis of the whole course of instruction.

The exercises of the school room, which are strictly educational, are based upon no new principles of education—for many of the principles adopted in any judicious course of instruction for ordinary children will be equally applicable to our pupils—but consist of novel applications of those principles to meet the peculiar mental conditions of the subject.

The method of instruction is peculiar in this: that it commences with exercises adapted to the very lowest degree of intelligence, and proceeds, by a very gradually ascending scale, up to the point where ordinary systems of education begin. These exercises commence at the lowest possible point that can well be conceived of—the exciting in an inert mind, incapable of self-determination, in response to suitably applied stimuli, the feeblest voluntary action—and end with those that constitute the lessons of an ordinary elementary school. To each class of pupils, as far as they can be classified, a series of intellectual exercises are adapted, and each series of exercises is so graduated to the next series above, that the subject of them may be easily led from one to the other.

There are now ten institutions in the United States for this class of children.

The largest is at Columbus, Ohio. It is a State institution, and will accommodate 350 inmates.

The Pennsylvania Institution is located at Media, and has now 186 inmates.

There are two in New York: the New York State Asylum for Idiots, at Syracuse, has 180 pupils, and the New York City Asylum, located on Randall's Island, has 147 inmates, of which number 106 attend school.

In Massachusetts there are three institutions. One at South Barton, supported by the State, has 106 inmates; one at Barre, a private asylum, has 75 inmates, and one at Fayville—(a private school, recently put in operation) number of pupils unknown.

In Connecticut there is an asylum located at Lakeville which has 53 pupils.

Kentucky has an institution located at Frankfort, with 87 pupils.

The Illinois Institution has 71 pupils. The total number of imbecile children under instruction in institutions, public and private, in the United States, is probably about 1,000.

Annual Report of the Connecticut School for Imbeciles, at Lake, ville, Conn.: 1872. Dr. H. M. KNIGHT.

The number of pupils connected with the school during the year was 55; the present number is 48.

Dr. Knight has in this report treated upon the subject of causation. His opinion inclines to that of the more recent investigations, that consanguinity is not as has been supposed, the greatest cause of idiocy or imbecility, but that the tables to which access has been had prove the contrary.

He quotes from Bemiss, of Louisville, from Liebreich, of Berlin, Troussseau, Boudin, and Voisin. We see no reference to the labors of Drs. Newman and Allen, who have so recently and fully investigated the effects of consanguinity in marriage.

FOREIGN REPORTS.

Twenty-fourth Annual Report of the Somerset County Pauper Lunatic Asylum: 1871. Dr. C. W. CARTER MADDEN-MEDLI-COTT.

There were in the Asylum at date of last report, 628 patients. Admitted since, 160. Total, 788. Discharged recovered, 120. Died, 66. Condition not stated, 79. Total, 265.

The Doctor sustains the theory of the physical causation of insanity, and says, "that in the medical treatment of the cases that have come under observation the past year, care has been taken to form so correct an examination of each individual case, that 'diagnosis,' should form the safest index to the therapeutical means adopted.

. . . . That medical treatment has been directed to meet the most important morbid symptoms in question."

Report of the Richmond District Lunatic Asylum, Dublin : 1871.
JOSEPH LALOR.

There were at date of last report, 986 patients. Admitted since, 357. Total, 1,343. Discharged recovered, 168. Improved, 62. Unimproved, 5. Deaths, 114. Escapes, 1. Total, 350. Remaining, 993.

This Institution was established in 1830, for 257 patients. It now has 1,040 beds, of which 993 are occupied at the present time; the district has been somewhat diminished in population. This would apparently give good reason for supposing that insanity was largely on the increase. The Doctor is, however, disposed to attribute this increase to the desire of the public and friends of lunatics to place them in asylums. The statistical matter is very full, embracing 51 tables, and furnishing information upon a great variety of topics.

Report of the County Lunatic Asylum at Prestwich : 1871. Dr. J. HOLLAND.

There were at date of last report 1,020 patients. Admitted since, 220. Total, 1,271. Discharged recovered, 141. Improved, 24. Unimproved, 27. Died, 75. Total, 267. Remaining, 1,004.

Dr. Holland retires from the superintendency of this Asylum after a service of 22 years, and assumes a like position in the County Asylum at Whittingham. In parting with him the committee express a very high appreciation of his valuable services.

Report of the York Lunatic Asylum : 1871. Dr. FREDERICK NEEDHAM.

There were at date of last report 180 patients. Admitted since, 38. Total, 218. Discharged recovered, 14. Relieved, 3. Not improved, 5. Died, 10. Total, 32. Remaining, 186.

We quote from the report the following incident:

A curious and painful accident occurred to one of the male patients, which suggests reflections interesting to those who are concerned in the management of asylums and the care of the insane. I was standing at the door of one of the airing courts, when I observed a male patient, who was taking exercise, suddenly fall in an epileptic fit, face downwards, upon the grass. He uttered no cry, and gave no other warning of the attack. He was, of course, at once attended to, and, with the exception of a bleeding nose and mouth, seemed to have sustained no injury. In half an hour the attendant asked me to visit him again, as the bleeding had not ceased, and, on examination, I found that the lower jaw was fractured in two places. The patient ultimately made an excellent recovery. Now, suppose that this accident had occurred in a large court, thickly planted, or that from any cause the patient's fall had been overlooked for a few moments, and death ensued from suffocation, what an extreme ugly combination of events would have presented itself to a coroner's jury—sufficient, indeed, to warrant them in returning a verdict of death from violence, to wit, a murderous blow on the face.

Such accidents as this demonstrate two facts of much importance to all persons connected with asylum management. Firstly, that the superintendent of an asylum is at all times surrounded by the possibility of temporary loss of credit from circumstances over which he can not exercise an atom of control; and that, therefore, although he can not be absolved from legitimate responsibility, he is entitled to a just and discriminating criticism; and, secondly, that attendants upon the insane, while they are neither much better nor much worse than other people, may be easily credited with crimes which they do not commit, and suffer unjustly for no fault of their own.

During the progress of the above case, it was found impossible to keep the patient from tearing off the bandages, and his hands were, therefore, restrained until the bones were united.

Sixth Annual Report of the City of London Lunatic Asylum:

1871. Dr. OCTAVIUS JEPSON.

There were at date of last report 265 patients. Admitted since, 82. Total, 347. Discharged recovered, 22. Relieved, 6. Unimproved, 22. Not insane, 1. Died, 21. Total, 72. Remaining, 275.

Tenth Annual Report of the Cumberland and Westmoreland Lunatic Asylum: 1871. Dr. T. S. CLOUSTON.

There were at date of last report 401 patients. Admitted since, 130. Total, 531. Discharged, 86. Died, 41. Total, 126. Remaining, 405.

Sixty-three patients were discharged recovered, which is 48 1-2 per cent. on the admissions. Of these, three-fourths, or forty-seven had been placed under treatment within the first month of their insanity. The practice of allowing patients to be removed for a month on trial is growing in favor. The most obvious disadvantage beside the clerical labor and the complication of the accounts, is the fact that the individual is considered a patient of the asylum, and that a certain amount of responsibility for his action attaches itself to the officers of the institution, who virtually retain no power over him while the term of probation continues. "The medical treatment of the patients occupies an exceedingly important place in the minds of the medical officers; they endeavor to realize the fact at all times, that every patient who is sent here is an individual who labors under a disease which must be treated as a special and separate thing in each person, and, if possible, treated for its amelioration and cure."

Report of the Provincial Lunatic Asylum, Fredericton, N. B. : 1871. Dr. JOHN WADDELL.

There were at date of last report 248 patients. Admitted since, 104. Total, 352. Discharged recovered, 47. Improved, 25. Unimproved, 2. Died, 32. Total, 106. Remaining, 246.

The Institution is already so much overcrowded that the Doctor writes this note of warning, that "the time may not be far distant when, owing to overcrowding, typhoid fever may break out and decimate our num-

bers." Upon the subject of further provision, the action of the Association of Superintendents is quoted, and the experience of Dr. Roy of Quebec, all of which is a protest against separate provision for the chronic insane.

REVIEWS.

The Treatment of Venereal Diseases—A Monograph on the Method pursued in the Vienna Hospital. M. H. HENRY, M. D., Surgeon to the New York Dispensary, Department of Venereal and Skin Disease, &c., &c. New York: William Wood & Co.: 1872.

This monograph is reprinted from the *American Journal of Syphigraphy and Dermatology*, for April, 1872. The reason for and scope of the work are best given in the Doctor's own words:

Experience has proved that the assumption that every practitioner of medicine is perfectly familiar with the therapeutics and essentials of treatment in venereal and the kindred diseases is, to say the least, a rash one. We have in this country—and it is a lack deeply to be regretted—no hospital in which this specialty may be studied on a large scale. The general directions given in the treatises in our language regarding the application of thereapeutics are, moreover, meagre, since they fail to cover the *details* which form so considerable a part of the practitioner's duty.

The following pages are a contribution towards filling this void, presenting, as they do, the results of practice in the foremost hospital of Continental Europe, namely, the Vienna Hospital, under the direction of Professor Von Sigmund.

It is to this celebrated institution, where German acumen, patient study, and faithful recording have been so admirably exemplified, that we owe the most valuable advances made in venereal pathology and therapeutics during the last twenty years. This fact will be a sufficient justification of the very minute directions, and the long list of formula given in subsequent pages.

Much attention is paid to the proper hygienic measures to be adopted in the treatment of this form of dis-

ease. Cleanliness is particularly enforced in regard to the person, the diseased part, and all the appliances and dressings used in the hospital. Full and explicit directions are given in reference to the minute details which should command the attention of the medical practitioner. About two hundred of the most reliable prescriptions used in the Vienna Hospital are recorded and their points of similarity and difference pointed out. It is a valuable contribution which we commend to the profession.

Skin Diseases, their Description, Pathology, Diagnosis and Treatment. By TILBURY FOX, M. D., London, M. R. C. P., &c., &c. Edited by M. H. HENRY, M. D., Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases, &c. William Wood & Co., New York: 1872.

The known ability of the author, his practical experience in the treatment of skin diseases, and the character of his previous writings upon the subject, are a guarantee that a work from his hands would be worthy the attention of the medical profession. A careful perusal of this volume confirms such an opinion.

The design of the work is fully set forth in its title. The classification of disease is new and mostly in accordance with the nomenclature proposed by the College of Physicians. This simplifies the subject and if followed by others will do away with the cumbrous and unscientific divisions which have hitherto prevailed and have been as various as the different authors who have treated it. A description of some forms of skin disease which exist, almost exclusively in certain remote localities, is a new feature of the work, and renders it of special value to those who are called upon to treat them. A large number of prescriptions which have been tried and found useful are recorded. A full glossarial index completes the book.

The American editor, Dr. Henry, in presenting it to the favor of the profession, remarks: "The book is a good one; so good that I have refrained from trespassing on its pages or the patience of the reader with many 'notes and additions.'" Such an indorsement from so high an authority carries much weight and renders further comment unnecessary.

Lectures on Aural Catarrh, or the Commonest Forms of Deafness, and their Cure: By PETER ALLEN, M. D., Fellow of the Royal College of Surgeons, Edin., &c., &c. William Wood & Co., 27 Great Jones St., New York: 1872.

This claims to be the first separate work published in the English language upon Aural Disease, since that of Toynbee, in 1860. It does not pretend to be an exhaustive treatise upon the subject, but to embody the ideas of the author as to the *system* to be pursued in striving to advance scientific knowledge.

The design of the work is concisely stated, as a desire to help the earnest reader, by telling him *how to examine, what to look for, and where to find the disease*, in a case of Aural Catarrh.

The book has 275 pages, and is full of valuable information for the general practitioner. We find here an explanation of many conditions which are often overlooked or misinterpreted by others than those who devote themselves to the specialty of aural diseases. It is fully illustrated with cases, occurring in actual practice.

The publishers have presented it in good type and on good paper,—which will add much to the pleasure and comfort of its readers.

A Year Book of Therapeutics, Pharmacy, and Allied Sciences: Edited by HORATIO C. WOOD, Jr., M. D., Professor of Medical Botany, University of Pennsylvania, &c., &c. New York, William Wood & Co.: 1872.

This book presents a general sketch of the progress

made in these branches of medical science during the year. It is divided into five parts; viz.: Therapeutics, Materia Medica, Toxicology, Prescriptions and Formulas, and General Receipts.

The articles comprising the volume have been gleaned from various medical journals of this and foreign countries, and place, in a condensed and convenient form for the busy practitioner, a large amount of valuable information. Special attention has been paid to collecting experience in the use of the newer remedies, and to recording physiological observations upon the action of all drugs and remedial agencies. The great advantage of this practice of the annual publication of a work of this kind, will be appreciated by those who desire to keep abreast with the discoveries and advances in this field of medical knowledge.

Like the other volumes issued from the press of W. Wood & Co., this is worthy of notice alone from the excellence of the typography and paper.

The Physiological and Therapeutical Action of the Bromide of Potassium and Bromide of Ammonium; in two parts. By EDWARD H. CLARKE, M. D., and ROBERT AMORY, M. D. Boston: James Campbell, 1872.

Investigation of the remedies which have been comparatively recently introduced to the profession, and have not as yet gained a fixed status in the various pharmacopeias and dispensatories, are of special value. Much remains to be learned and recorded concerning them. Theories which have been advanced of their manner of action in the system, are to be confirmed or refuted by clinical experience, the touchstone to which all remedies are to be subjected before their proper position can be assigned them. As aiding in this useful and necessary labor, the volume on the bromides has its place.

Dr. Amory first presented a paper upon the bromides in the *Transactions of the Massachusetts Medical Society*. The second edition now called for is prefaced by an article by Prof. Clarke. The experiments made confirm the effects reported by Brown-Sequard that under the influence of the bromides, "the arterial vessels alike of the periphery and the nervous centres undergo a manifest contraction, from whence there results a topical oligæmia of the encephalon and of the spinal cord, and a consequent diminution of the irritability of that organ. Prof. Clarke adds:

It is apparent from these considerations, that the bromide of potassium, by contracting the arterioles of the brain and expelling temporarily a certain amount of blood from them, may produce wakefulness or sleep, according as the condition of the brain is one of hyperæmia or oligæmia.

This distinction in the effects of the remedy as an indication for the use of it, we consider of great importance. Without attention to the state of cerebral circulation much injury may be done; instances in which this has happened will no doubt occur to our readers.

The action of bromide in single, continued and toxic doses are pointed out, as also the phenomena which they exhibit. These are divided into the two classes: the therapeutic, and disagreeable and toxic group. The special applications of the continued dose form an interesting chapter in therapeutics. Its use in epilepsy is commended in large and long continued doses. The experience of others is largely quoted in this connection. The action and use of bromide of ammonium is substantially the same as those of potassium; it is said, however, to be more irritating to the stomach.

Dr. Amory treats the subject of Physiological action under the following propositions:

A. Bromide of potassium is absorbed readily by any portion of the healthy mucous membrane with which it is placed in contact.

B. This drug is largely and mainly eliminated with the urine; during the first day the largest portion passes out of the system, less during the second day, and so on until there is none left in the system.

C. The skin assists in the elimination of this drug from the system on the second as well as the first day.

D. The loss of reflex action is due to the determination of blood in the periphery of the nerves, and also of the central nervous system; the last occurring after the first.

E. The action of bromide of potassium on the nervous system may be explained by its action on the capillary, arterial or central circulation.

We quote some of the concluding remarks:

I consider its continued and prolonged use contra-indicated in anaemia and chlorosis. That it is a specific against epilepsy is erroneous. Such cases as proceed from anaemia of the cord, or any part of the brain, will not be ameliorated by its use. When there is a congestion, there will be benefit. Again, if the dose could be administered only when an attack is anticipated, it would be following out the indication of its physiological action.

We commend the work to those engaged in treating diseases of the nervous system, and to the profession generally.

A Treatise on Diseases of the Bones. By THOMAS M. MARKOE, M. D., Professor of Surgery in the College of Physicians and Surgeons. Surgeon New York Hospital, Surgeon of Bellevue Hospital, &c., &c. New York: D. Appleton & Co.: 1872.

This book contains the substance of the lectures delivered by Prof. Markoe, during the past twelve years, at the College of Physicians and Surgeons, of New York City. It does not claim to be an exhaustive work upon the subject of which it treats, but the author, as

he states, follows the leadings of his own studies and observations, dwelling more on those branches which he has seen and studied most.

The time given to the work has been taken from an active professional life, and this fact shows the enthusiasm and devotion of the Doctor to the subject. He acknowledges his indebtedness to various authors, from whom he has quoted, and to his professional friends.

The work is illustrated by cuts from Paget, Billroth, Heath, Erichsen, and others, and by original designs from photographs of specimens in the New York Hospital Museum. It is divided into three parts, Diseases of Bone, Tumors of Bone, and Malignant Diseases of Bone. The last part, upon Cancerous disease, is especially full and interesting, and contains many original illustrations and the results of minute microscopical examinations. It is a valuable contribution to surgical diseases, and is written in a pleasing and attractive style.

Works of Sir James Y. Simpson. Vol. III.—*Clinical Lectures on the Diseases of Women.* Edited by ALEXANDER R. SIMPSON, M. D. New York: Appleton & Co.: 1872.

The lectures included in this volume appeared in the *Medical Times and Gazette*, during the years 1859–1861, and it was the intention of the distinguished author, to have presented them to the profession in book form. This work has, however, been ably performed by other hands.

The lectures are not arranged in systematic order, but this is made up for in the fullness of the index. They are fifty in number, and embrace an almost equal variety of topics. Many of them are treated of more at length than is usual in books of like character. The general practitioner will find here many things of prac-

tical importance, for which he will look in vain elsewhere. The publishers have given the book an attractive and substantial dress.

REPORTS OF SOCIETIES AND INSTITUTIONS, AND PAMPHLETS RECEIVED.

Third Annual Report of the State Board of Health of Massachusetts: 1871.

The report is an highly interesting one, and contains several articles of merit. The first one "On Arsenic in green colors, by Dr. Frank W. Draper," is a general *résumé* of the subject of arsenical poisoning by the use of this mineral in the preparation of wall papers. It may serve to direct the attention of practitioners and the public to this possible source of danger in all cases of poisoning by arsenic. It is accompanied with samples of the paper, which contain from 5.42 to 29.32 grains to the square foot.

"The Use and Abuse of Intoxicating Drinks throughout the Globe:" by Dr. H. S. Bowditch. This is a strong temperance document, written in the interests of truth and science. The position assumed is, not the impracticable and untenable one of a "total abstinence" man who can see no place or use for stimulants of any kind, and affirms that alcohol is at all times and ever "a poison." The Doctor's position is thus stated, and will, we think, be sustained by the medical profession generally. "I take the following position, and I fearlessly assert that clinical experience proves, if it prove anything, that every form of stimulant now in use can be made a blessing, if used temperately and on proper occasions." "I believe that physicians do, at times, save human life by using various stimulating drinks with the utmost freedom. Moreover, I do not

believe there is a single article in the *materia medica* that in its various forms of elixirs, tinctures, extracts, &c., or when singly combined with water, is more necessary than alcohol in the treatment of disease."

But while making this appeal, as a medical man, in behalf of the proper and temperate use of spirits, and for therapeutic purposes, the Doctor gives no comfort to those who habitually use alcoholic drinks. He is a strenuous advocate of temperance, and thinks the cause will be advanced through the agencies of education and moral suasion rather than by any positive prohibitory law. "We have forgotten that it is impossible in a republic to carry out any law that is unsupported by the deeper sentiments of the people."

"Proper Provision for Insane:" by Edward Jarvis, M. D. This article is founded upon the experience of a physician, in private practice, and among a class of quiet patients who are able and willing to incur any reasonable expense for care and attendance. This is shown by the histories given, and by the acknowledgement of the Doctor. In his remarks upon asylum architecture, reference is made apparently to the same class, who are to be treated in dwellings adorned and fitted up to correspond with their own homes and surroundings, while the disturbed and maniacal are to be separated and isolated from the world in substantial prison-like structures, as he says: "Moreover, as everything should be arranged to keep in the patient's mind feelings of home as much, and to remind him of the hospital as little, as possible, these dwellings for the mild should be not only separate from, but out of sight of, the stronger and more forbidding house, which might call out their painful sympathies, or be an ever present warning to them of their liability to change for the worse, and, a standing threat that if their disease should take an unfortu-

nate turn, and they become excited, they must be removed to that place of stricter confinement."

We do not understand this dread of the use of the word hospital. The patients who seek relief from their malady are sick people, and are placed in institutions for medical treatment, and not to be boarded out, or for custodial care. And experience teaches that the more fully this idea is impressed upon the persons treated, the more heartily do they second the efforts made to benefit them; and the more thoroughly they appreciate their condition, the greater is the hope of a speedy recovery. They should rather be made to look upon the hospital as a means to accomplish so desirable an end. The pleasant names for "the strongly built and more forbidding house" "as grove house, valley house, orchard house, &c.," if employed, would not cover up or conceal the fact that they were for the residence of the noisy and disturbed, and after this became known, they would be suspected, and the more hated for the very deception employed. Care should rather be taken to remove from the wards everything that is mysterious and unpleasant or forbidding; so that, if necessary, the change from the quiet to the disturbed ward may be made without attracting the attention of the patient, or of friends, to the broad distinction of condition. This would reduce the moral effect to the minimum.

Again, the larger number of those who can enjoy such surroundings as are pictured, are either cases convalescing from acute attacks of disease, and who will soon return to their homes, or the chronic and harmless who can be retained at home. This latter class the public do not propose to retain in institutions. We should be pleased if it were possible to suggest some plan of hospital building, more economical and better

than the one now in use, but we do protest against any plan which has for its only recommendation the elevation of a class to the detriment of the masses, or in the theorizing of those without experience in the general treatment of the insane.

The other articles are on "The Use and Abuse of Opium;" "The Effects on the Health of the Use of Sewing Machines moved by Foot Power;" "Slaughtering, Bone Boiling and Fat Melting;" "Vegetable Parasites, and the Diseases Caused by their Growth, upon Man;" "Small Pox in Massachusetts" and a health report from various towns of the State. We commend the report to the medical profession, as a valuable contribution tending to promote the health of the community and hygienic science.

Transactions of the Twenty-first Anniversary Meeting of the Illinois State Medical Society, held at Peoria, May 16, 1871.

The report is printed on poor paper, and is illustrated by numerous badly executed wood cuts. The subject-matter is good, and should have been put in a more attractive form to obtain readers beyond the circle of those personally interested.

Annual Report of the Commissioners of Emigration of the State of New York: 1872.

This gives in detail the action of the Commissioners in the reception and transfer of emigrants arriving at New York. It also describes the working of the various charities under the control of the Board.

First Annual Report of the Ontario Institution for the Deaf and Dumb, at Belleville, Ont.: 1871.

This is a new institution which has been in successful operation for one year. It accommodates 100 pupils.

Quarterly Summary of the Transactions of the College of Physicians of Philadelphia: February, 1872.

Forty-Sixth Annual Report of the Massachusetts Eye and Ear Infirmary: 1872.

Notes on Fluid Extract of Senega, Cantharides, and a Blistering Liquid, Officinal Extract of Jalap, Rhubarb, Pareira, Litmus Paper, Commercial Bi-Carbonate of Soda and Chloral: by EDWARD R. SQUIBB, M. D. [Reprinted from the Proceedings of the American Pharmaceutical Association: 1871.]

Report on Ophthalmology, for 1871. HENRY D. NOYES, M. D. [Reprinted from the *New York Medical Journal*, March, 1872.]

Amnesic and Ataxic Aphasia: T. M. B. CROSS, M. D. [Reprinted from the *American Practitioner* for April, 1872.]

Report of the Manhattan Eye and Ear Infirmary: New York.

Mechanical Surgery: E. D. HUDSON, M. D. New York.

Defense of Taxis in Strangulated Hernia: C. C. F. GAY, M. D. Buffalo, N. Y.

Report of the Board of State Commissioners of Public Charities Concerning the Management of the Dispensary and Hospital Society of the Women's Institute of New York City, and the Testimony taken by the Board: 1872.

Synopsis of Student's Microscopes: by R. H. WARD, M. D. [Reprinted from the *American Naturalist*, June, 1872.]

Report Submitted to the Trustees of Cornell University on Mr. Sages' Proposal to Endow a College for Women. By ANDREW D. WHITE, Chairman of the Committee: 1872.

S U M M A R Y.

CONIUM IN THE TREATMENT OF ACUTE MANIA.

BY J. CRICHTON BROWNE, M. D., F. R. S. E.,
Medical Director, West Riding Asylum.

The views of Dr. Browne set forth in this article are fully sustained by our experience in the use of conium. We have for some years been making special investigation with this drug, and have found it a most efficient remedy. We have used both the fluid extract of the leaves and of the seed, made by Dr. E. R. Squibb, of Brooklyn, the latter being preferred. For some months past one of the medical staff of the Asylum has been making observation and notation of cases for publication, the results of which will be presented at some future time:

EDS.

It has been lately intimated that the sedative treatment of mental diseases, characterized by excitement, is neither necessary nor desirable. Dr. Maudsley has hinted that recovery is retarded rather than hastened when sedatives are had recourse to; and has questioned whether "the putting the nerve-cells of the patient's brain into chemical restraint, so to speak," by the use of such remedies, "does really benefit them." The arguments which have been thought to justify these speculations have not yet been fully set forth; and, as they must doubtless be of a weighty nature, it may seem rash, when only partially acquainted with them, to dispute the propriety of the practical suggestion which has been founded upon them. That practical suggestion is, however, so thoroughly opposed to the teachings of experience and of modern pathology, and derives so little feasibility from the insinuations by which it is accompanied, that it challenges the immediate examin-

ation of those who are engaged in the treatment of insanity, and who are anxious to be able to give some reason for the therapeutic faith that is in them.

To prove that sedatives have been highly valued in the treatment of mental excitement from the very earliest times when medical science was brought to bear upon insanity, would not, perhaps, count for much in these days in which the wisdom of ancestors is disallowed in anything less obvious than the invention of the wheelbarrow, were it not that, in the present instance, the wisdom of our ancestors is in happy accord with that of ourselves. Sedatives are still all but universally employed in lunatic asylum practice, and have not as yet forfeited in any degree the confidence of those who are most familiar with them. And that confidence is by no means so blindly empirical as is supposed by Dr. Maudsley, who is certainly in error in asserting that "no one has ever yet tried the experiment of treating one case of acute insanity without giving any sedative whatever, and of treating another case as nearly like it as possible with sedatives, and of observing the result." I have no hesitation in saying that that experiment has been repeatedly instituted, and has led to a conviction, in those who have tried it, in all respects favorable to sedatives. In two cases in which I myself applied that very test, I found that a rapid recovery took place in that in which a sedative was used, and that protracted excitement and a tardy convalescence had to be encountered when everything was trusted to the course of nature. It does certainly excite surprise to notice a case of puerperal mania, in which recovery occurred in *four months*, referred to by Dr. Maudsley as an instance of the success of a non-sedative treatment.

That sedatives have the power of subduing mental excitement is not denied, so that the question is simply whether it is judicious to employ that power. Now mental excitement is a sure indication of disordered activity in the delicate nerve-cells and tissues of the cerebrum; and not only so, but it is a rough gauge of the severity of those encephalic changes of which it is the outward expression. When the excitement is mild in character, interrupted in progress, or of brief duration, we infer that it coincides with mere functional derangement. When it is intense in type, of firm persistence, and of long continuance, we conclude that it betokens some organic alteration. Whether, however, it is intense or mild, of organic or functional origin, we know as a certainty that mental excitement corresponds with morbid processes or changes which have an enfeebling influence upon the structures affected by them, and

which may eventuate in permanent weakness or decay of those structures, or in systemic death. We know further that the evil consequences of that destructive metamorphosis upon which excitement depends are serious and far-reaching just in proportion as that metamorphosis was extensive and protracted. Where the waste is rapid and the excitement fierce, exhaustion and death are apt to ensue; where they are protracted and uncontrolled, dementia or relapses may be anticipated. Only where they are moderate and short-lived can complete recovery be looked for. The testimony of those who have had large opportunities of observing insanity will establish that in acute mania, life and the restoration of reason are jeopardized in proportion to the intensity and duration of the mental excitement, which constitutes its chief symptom, and of the histolitic processes the presence of which that excitement betrays. My own investigations have satisfied me that there is a constant relation in general paralysis between the amount of maniacal excitement by which its progress is marked and the period at which death supervenes, as well as the extent of the pathological changes which are essential to the disease. In recurrent mania it is acknowledged that every attack of mental excitement leaves an increased weakness of the brain behind it, and that thus it is that the intervals between the attacks are gradually shortened.

The above considerations, without any multiplication of examples, make it evident that the cerebral conditions upon which mental excitement depends are most pernicious in their immediate and remote effects. It would seem to follow, as a necessary corollary, that it is of the first importance, as far as possible, to reduce the severity and curtail the duration of these cerebral conditions, so that their effects may be mitigated. This corollary, however, does not secure assent. Dr. Maudsley asks if it is a proper thing to stifle excitement, which suggests the inquiry if it is a proper thing to stifle fire. Both, when they have overleapt their ordinary boundaries, hurry to destruction. The nerve-cells of the brain have no innate tendency to energize in a beneficent and healthy manner. In education they have to be stimulated in some directions and repressed in others. In disease they do not develop any new principle of spontaneous rectification. Insanity is not a self-limited disorder, running a determinate and inevitable course. On the contrary, it may be arrested or indefinitely prolonged. And even if it were self-limited, that would be no reason for abandoning all attempts to modify its progress. Pyrexia may be fitly com-

pared with mental excitement, which is, as it were, the fever of the mind. In many bodily diseases the prognosis may be founded on the height of the pyrexia, as in mental diseases we have seen it may be drawn from the height of the excitement. Well, what is the modern treatment of pyrexia? Why, to reduce it by all possible means. Those who have made acquaintance with the writings of Jürgenson, Leibermeister, and Ziemssen in Germany, and of Dr. Wilson Fox in our country, will allow that certain fevers have had a new hopefulness conferred upon them by the practice of applying a most powerful sedative—viz., cold water—to the burning skin. All observers agree as to the inestimable value of this method of treatment in diminishing mortality, and in altogether averting certain symptoms of a distressing kind. Well, sedatives are to the excited mind what cold water is to the fevered body. They cool the heated faculties; they soothe and comfort the agitated brain; they chemically restrain the exuberant nerve-cells. Chicago would not have been desolated had adequate restraint been exercised on the conflagration at its outset; and many an inflamed mind would be saved alive could the excitement which consumes it be got under at once. The sedative treatment of excitement is not contra-indicated by any special pathological condition. Whether that excitement originates in excessive functional activity of the vesicular neurine, in defective nutrition of that tissue, in peripheral irritation, or in alterations in the quantity or quality of the blood-supply, well-chosen sedatives may always with other remedies be suitably employed. Dr. Maudsley, of course, repudiates all this. "Let a person," he says, "be made artificially lunatic by belladonna. Who would, if called to treat him, prescribe a dose of chloral or a dose of opium?" Dr. Maudsley must have forgotten the researches of Anderson and Bell, and the fact that opium has actually been successfully used as an antidote to belladonna, or he would not have asked such a question. When mental excitement is indubitably due to blood-poisoning, we should no more on that account refrain from attempting its subdual by sedatives than we should on the same ground hesitate to staunch a haemorrhage or to relieve pain. The *materies morbi* is not eliminated in incoherence, delusions, and muscular agitations, but is probably fed and reproduced by the disintegration of tissue which these promote.

The objection that sedatives cut short excitement by inducing dementia, and not only restrain but disable the nerve-cells, will be refuted by a reference to experience. The facts that, notwithstanding

ing the calumnies which have been uttered against them, they are still held in high esteem by sagacious practitioners, and that an addition to their number is hailed as a boon to humanity, ought to indicate that the tranquility which they create is not so deadly and deceptive as has been represented. In this paper will be found recorded a number of cases in which, under the use of an arch sedative, unmistakable improvement, not only in weight, appetite, and temperature, but in mental condition, took place, in which primary excitement was calmed and secondary dementia curtailed. Another opportunity will be taken of combating some statements derogatory to opium which have been made, and of reporting results differing from those which Dr. Clouston has obtained in his experiments with that drug. The analogy drawn between the prejudicial effects of mechanical restraint applied to the limbs and the action of sedatives can hardly be intended as a serious argument. To say that because strait-waistcoats did harm sedatives can do no good, would be as if to contend that shutting off the steam must be futile because holding on by the fly-wheel had been found ineffectual.

From what has been now said it seems to result that mental excitement is assuredly the special indication for the use of sedative remedies. To this, however, it must be added that there are several varieties of mental excitement and several varieties of sedatives, and that it is in the nice adaptation of the latter to the former that successful treatment consists. If a particular sedative has been tried in a particular case of mental excitement and found inefficacious, that is a reason, not for casting discredit upon the whole class to which it belongs, but for doubting the wisdom of its selection. If a particular sedative of much potency has been resorted to in all cases of excitement without distinction, and has signally failed to do good in a majority of them, then the proper conclusion would seem to be, not that sedatives are useless, but that their indiscriminate application is foolish.

In a number of investigations having for their object the discovery of some principles by which the choice of sedatives in cases of excitement might be guided, I have been led to the conclusion that conium—a very old remedy with a good modern reputation—is the sedative, alone or in combination, which above all others is best suited for the treatment of that variety of excitement which we call acute mania. A remark of Dr. Harley's, in his admirable work "On the Old Vegetable Neurotics," first suggested to me that mania might be favorably influenced by that drug. As, how-

ever, my earliest experiments with it were, from causes which shall be hereafter explained, almost barren of results, I yielded to the conviction that Dr. Harley was mistaken, and that conium could not exert any beneficial influence upon the higher ideational nervous centres. Remembering that the mind of Socrates remained unclouded to the last—he actually recollects his debt to the doctor when *in articulo mortis*,—and that Dr. Harley's observation pointed only to the influence of conium on the motor centres, I conceived that the cerebral hemispheres were beyond its reach; that it might act very well in chorea, paralysis agitans, and convulsions, but was impotent in mental aberration. Circumstances, however, having led me to review that conclusion, and to investigate the properties of conium with a more thorough and searching procedure than that formerly employed, I soon came to perceive that it is most beneficial in mania, and that it is so chiefly by virtue of that action on the motor centres which Dr. Harley, Dr. Bennett, and others have demonstrated. It will be at once recognized that motor excitement is an important and constant element in mania. Exuberant locomotor and vocal spontaneity are often amongst its earliest harbingers. The novice in that disease hurries from place to place, trembles or chatters incessantly long before the movements of the limbs or tongue can be connected with any morbid sensation or emotion. A vague impulse to activity with an overflow of vigor, dependent upon irritation of the motor centres, is all that can be recognized at this stage. But the rapid movements in which this impulse and overflow are displayed tend, by their nature and physiological concomitants, to excite the cerebral hemispheres and involve the mental functions. The mild delirium described by Coventry Patmore—the most domesticated although certainly not the tamest of poets—as the result of the nineteenth century waltz, is an example of the facility with which quick movements may pass into quickened thoughts and feelings—a process of which innumerable illustrations are contained in the history of the ecstatic worships of antiquity, of tarantulism, and of the convulsionnaires in more recent times. Thus the restlessness and loquacity of incipient mania favor emotional agitation, which again stimulates to muscular exercise, and so on through various stages of mutual exasperation until furious madness is reached. After this climax is attained, and indeed throughout the whole progress of acute mania, the muscular element plays an important part. If we turn to the best descriptions of that disease, we shall remark that they all dwell on the extraordinary mobility

which characterizes it; that they enumerate commotions of the muscular apparatus, such as tremors or jactitations of the limbs, tossings in bed, wild gestures, distortions of the countenance, violent movements, cries, and vociferations, as among its most invariable symptoms. Some of them, indeed, point to even more special affections of the motor organs. Prichard says:—"Notwithstanding this constant exertion of mind and body, the muscular strength of the patient seems daily to increase; he is able to break the strongest bonds, and even chains; his limbs seem to acquire a remarkable nimbleness and pliability, and a singular aptitude of performing movements and actions which appear almost supernatural." Griesinger, while denying the development of any extraordinary strength in mania, adds that "it is correct and very remarkable that the patients can continue, often for a very long time, to make use of their muscular power, and to an extent which far surpasses their capability during health." In several cases in which death has ensued from exhaustion after, or rather during mania, I have observed that the corpora striata have participated in that appearance of vinous staining, or purple blotchy discoloration, which is occasionally observed in the cortical layers of the hemispheres and adjoining medullary substance under such circumstances.

Seeing, then, that the motor factor forms so large a proportion of the integer of mania, it is obvious that if it can be subtracted, an important step is made towards the complete resolution of the disorder. If muscular tranquility can be insured in mania, there is good ground for hoping that mental calmness will speedily follow. If the limbs and tongue can be laid at rest, a predisposition to sleep is created. In health we all know that closed eyelids, the recumbent posture, general stillness, and a sense of weariness are most conducive to the approach of the "sweet restorer;" and in disease the same holds good to a great extent. In mania, if bodily quiescence is once secured, the chances are that sleep and improvement are not far distant. Now conium gives us the power of ensuring this bodily quiescence that is so eminently desirable. It soothes and refreshes the irritated or exhausted centres of motor activity. It exerts a powerful control over the corpora striata and whole motor tract to the periphery of the centrifugal nerves, allays restlessness and agitation of the muscular system, and thus clears the way for sleep, which is only waiting an opportunity to assert itself. Dr. Harley's investigations establish beyond cavil that the earliest physiological effects of conium are—sensations of weight

and weariness in the legs, dimness of vision from impairment of power in the muscles of the eyeball, giddiness, general languor and drooping of the eyelids; and that its later effects, when given in full doses, include strabismus, double vision, dilatation of pupils, prostration of strength, and complete muscular repose merging into paralysis, without any failure of memory, confusion of mind, or emotional disturbance. They also prove satisfactorily that, in convulsions and spasmodic diseases, in chorea, paralysis agitans, cramps, and indeed in all morbid conditions in which there is much excitement of the motor centres, much benefit may be derived from a judicious use of conium. Now these physiological actions of conium, and these therapeutical uses, alike indicate that it is upon the motor tract that its influence is first exerted, and that it is from this tract that it is propagated in certain directions. The rapidity with which the effects of conium are diffused—one might almost say flashed—throughout the system,—together with the fact that they are often accompanied by a deep-seated aching pain in the forehead, suggests that of the motor centres the corpora striata are those principally affected. But, wherever the affection of the motor centres may be inaugurated, there can be no question that, from first to last, that affection is of a tranquilizing character. Conium soothes and mollifies the motor centres, especially when they are irritated or excited, and does not, as has been alleged, disastrously depress muscular activity. The recovery from its effects is as the waking from invigorating slumber. It is as if a tonic had braced the active powers. No weariness, weakness, nor oppression remains. And hence its great value in mania. It produces, if we may so say, a salubrious paralysis, which slackens mental speed, invokes restorative sleep, and leaves behind it an enduring impression upon any tendencies which may exist to mortal extravagance, without entailing exhaustion or debility.

The virtues ascribed to conium in the treatment of mania have been abundantly shown forth in the trials of it which I have made in the West Riding Asylum. As I before announced, it was employed here in the first instances without affording any encouraging results. That was in 1869; and, as I now know, the experiments then made with it were absolutely nugatory because the preparations used were probably inert, and the doses administered certainly insufficient. In the beginning of last year, however, experiments with it were again commenced, and the results of these only require to be stated to secure the recognition of their importance. Since the 23d of February, when these experiments were begun,

up to Nov. 1st, (beyond which I have thought that it would not be fair, in the mean time, to carry my examination of the observations made,) twenty-eight cases of mania in all—twenty-five of acute mania and three of acute delirious mania—have been treated from the first with succus conii, the only preparation which can be employed with confidence. Of the twenty-five cases of acute mania, twenty-three have, up to the present date, (Jan. 1st, 1872,) been discharged recovered; one (a woman, Elizabeth N—, admitted July 31st,) has suffered a relapse; and one (a man, Thomas R—, admitted July 17th—second attack,) is still maniacal, but exhibits decided signs of improvement. Of the three cases of acute delirious mania, one has been discharged recovered; one (Hannah E—, admitted July 13th,) is still under treatment, but is improving steadily; and one (Mary Emma A—, admitted April 24th) terminated in death. In the case, however, in which there was a fatal issue, it ought to be mentioned that at the time of admission there were large bed-sores over the sacrum, ulceration of the lips and mouth, a crop of boils over the body, and a state of profound exhaustion from refusal of food. These figures must, I think, be regarded as eminently satisfactory, and as affording strong ground for believing that the dangers which ordinarily beset the treatment of mania—namely, death from exhaustion, consecutive dementia, indefinite protraction, and relapses—are in great measure obviated by the conium treatment. To give these figures just weight, it is necessary to add that the cases of acute mania in which the conium treatment was tried were not specially selected, but that all instances of that disease admitted, after the date mentioned, were without exception submitted to it.

With the view of determining the relative duration of cases of acute mania treated with conium and with other remedies, I have contrasted twelve cases from each category. As the result of that contrast, I find that twelve consecutive cases treated from the first with conium, admitted subsequent to Feb. 25th, 1871, and since discharged recovered, had an average duration as measured by residence in the asylum, of 102 days; whereas twelve consecutive cases treated with other remedies, such as bromide of potassium, cannabis indica, chloral, and digitalis, admitted subsequent to October 1st, 1871, and since discharged recovered, had an average duration, as measured by residence in the asylum, of 150 days. This shows a balance of 48 days in favor of conium. It will be seen, from the cases reported below, that when conium was used, that period of convalescence which it is thought prudent to interpose

between the date when recovery might be called complete and the date of discharge from the asylum was in no instance unusually shortened. In some cases it might be thought that it was unnecessarily prolonged. So rapid and decisive were the beneficial effects of the remedy that it was feared at first they might prove transitory, and that, as is not seldom the case when recovery is sudden, a relapse might be looked for. Experience having now taught that this fear is groundless, a considerable curtailment of the term of medical supervision may be henceforth safely conceded. Indeed, so prompt is recovery, as a rule, under the conium treatment, that it appears that the necessity of removal to an asylum may be obviated in some cases of acute mania, if it is had recourse to, and judiciously conducted, in their initial stage.

The curative effects of conium in acute mania are not limited to those cases in which that remedy is used from the outset of the disorder. Eight patients in this asylum, in whom other methods of treatment had been first employed, have derived marked advantage from the substitution of conium for other drugs.

To indicate the value of conium in acute mania more conclusively than can be done by general statements or numerical results, I have drawn up epitomes of some of the cases in which its therapeutical worth has been clearly exemplified in this asylum. Before adding to these epitomes, I have only to express my conviction that the conium treatment of acute mania will speedily recommend itself, to those who use it rightly, as the most efficacious mode of dealing with that form of mental disease. In order, however, to secure its benefits, two conditions must be observed : firstly, the preparation used must be good and active; secondly, the dose administered must be adequate in amount. The succus conii is certainly the most trustworthy preparation of the drug, and is that which has of late been used exclusively here. Even the succus, however, varies in activity in an extraordinary degree. Some of it is absolutely inert. That which has been found most reliable by me has been obtained from two of the London houses named by Dr. Harley, from an Edinburgh and from a German firm. As to the doses required, I can strongly corroborate Dr. Harley's assertion, that they must be sufficient to produce the physiological action of the drug in order to prove beneficial in disease. I can also support his conclusion, that the effect of conium is inversely as the motor activity of the individual to whom it is given. This being so, it must be evident that in acute mania, in which motor activity is at the maximum, very large doses will be essential. I have

given a woman laboring under acute mania as much as two ounces of succus conii at one dose, and have repeated this every four hours for two days. This was, however, an extreme case, and the patient had been gradually habituated to the use of the drug. As a rule I have commenced with two drachms of the succus, for a woman, and three drachms for a man; and have rapidly increased the dose until I have noticed some cessation of restlessness, or signs of lassitude or weakness of the limbs. It is rarely that a dose of one ounce or ten drachms requires to be exceeded; and sometimes improvement begins with the very first administration, in which case no increase of quantity is necessary.

CASE 1.—Lydia F—, aged thirty-five, house-wife, from Barnsley, admitted March 31st, 1871, having been insane for one month. Is a member of a family of drunkards; her sister hanged herself. When admitted she was in a state of violent maniacal excitement and great exhaustion, groaning, shouting, and struggling; pupils dilated and unequal; face flushed; refuses food, and is sleepless. Ordered succus conii, two drachms three times a day.—April 2nd: Much quieter; takes her food and sleeps well.—4th: Perfectly calm, and employs herself in sewing; pupils contracted and sensitive.—May 16th: Discontinue medicine.—June 20th: Is passing through a protracted stage of slight dementia characterized by loss of memory and energy.—Aug. 22nd: Discharged recovered.—Weight: March, 100 lbs.; April, 115 lbs.; May, 124 lbs.; June, 139 lbs.; July, 138 lbs.; August, 141 lbs.

CASE 2.—Sarah S—, aged thirty-seven, married, house-wife, from Doncaster, admitted April 24th, 1871. Has been intemperate; became insane a week ago. Is in a state of extreme maniacal excitement; talkative, restless and violent; pulse 120; pupils of average size, but sluggish; tongue and lips dry and covered with sordes; muscles hard and rigid. Ordered two drachms of the succus conii three times a day.—May 8th: Quiet and rational; pupils widely dilated; pulse 80.—11th: Convalescent. Discontinue conium.—July 7th: Discharged recovered.—Weight: April, 94 lbs.; May, 94 lbs.; June, 109 lbs.; July, 112 lbs.

CASE 3.—Lavinia B—, aged thirty-five, widow, domestic servant, from Huddersfield, admitted April 25th, 1871. Had a previous attack nine years ago. No cause known for present attack, which commenced a week ago. Is highly excited, shrieking, whistling, and fighting; sleepless and requires to be fed. Ordered half a drachm of tincture of cannabis indica and a drachm of bromide of potassium thrice daily.—April 29th: No better; is very

noisy, and has not slept since admission; kicks and bites all who approach her; face and ears much flushed; pupils contracted; eyes injected; lips and tongue dry; pulse 126. To omit previous mixture, and take two drachms of succus conii every four hours.—30th: Quieter; face less flushed; pulse 92.—May 1st: Has slept well all night, but is again greatly excited; takes her food well. Ordered four drachms of the succus.—2d: Has again slept well, and is now much quieter. To take the conium only twice a day.—4th: Quiet, but confused in her ideas. Complains of pain, weakness, and numbness in her limbs.—6th: Convalescent.—July 5th: Discharged recovered.—Weight: May, 126 lbs.; June, 128 lbs.

CASE 4.—George H—, aged twenty-four, married, laborer, from Hunslet, admitted June 3rd, 1871. Was never before insane. Was attacked three days ago, and has since been violently excited. Is fiercely maniacal; very restless and combative; assaults those around him; shouts out oaths and blasphemies; fancies that he is to be buried alive and is fighting with the devil; strips himself naked and destroys his clothes. Is a stout robust man, and enormously strong, florid complexion, brown hair, which stands out from the head as if bristly; muscles start and tremble as if from eagerness; conjunctivæ injected; mouth dry; pulse 108.—June 4th: Has passed a restless night and is most unmanageable. To take three drachms of succus conii every four hours.—5th: Still maniacal. Five drachms of conium every four hours.—6th: Much quieter, though still unable to converse; restless, and given to strip himself.—8th: Quiet and rational.—14th: Convalescent; complains of a strange feeling of lightness in the back of his head, and of general weakness. To omit the medicine.—August 24th: Discharged recovered.—Weight: June, 167 lbs.; July, 165.

CASE 5.—Elizabeth R—, aged forty-seven, house-wife, from Wakefield, admitted June 3rd, 1871. No previous attack. Has been insane three weeks. Was first depressed for a fortnight, then excited. A maternal aunt died in this asylum. Is violently excited, raving incoherently. Has not slept for some time, and has refused food. Face flushed; tongue red and raw; fed with the stomach-pump; two drachms of succus conii being administered by that means also.—June 4th: Has had several hours' sleep, and is more tranquil; answers intelligently, but can not keep her attention fixed; takes her food. To have three drachms of succus conii thrice daily.—5th: Is more excited, very garrulous and mischievous; bowels confined.—6th: Has slept well during the night, but is still excited and restless. To take four drachms of the suc-

cus conii every four hours.—7th: Much more composed; talks rationally, but voluminously.—23d: Convalescent.—July 23d: Discharged recovered.—Weight: June, 120 lbs.; July, 130 lbs.

CASE 6.—Joseph H—, aged thirty-five, married, blacksmith, from North Brierly, admitted March 7th, 1871. His father died of paralysis; a paternal uncle and aunt were insane. Has suffered from domestic anxieties. Became excited eight days ago, after ten days of sullenness and depression. Is very restless and talkative; can not remain still for a second; says that he is St. Paul. Is in fair bodily health; neck bears marks of recent blister.—March 18th: Extremely violent. To take six grains of ergotine thrice daily.—23d: The excitement has passed off, but the patient is silent and stupid.—30th: Still quiet. To omit medicine.—May 22d: Has again become dangerously excited. To repeat ergotine. June 11th: No better. This morning he sprang out of bed naked, and jumped through a glass door without so much as scratching himself. Ordered to leave off ergotine, and to take four drachms of succus conii thrice daily.—13th: Declined food and medicine, and remained maniacal until last evening, when he was fed by means of the stomach-pump, the succus being given at the same time. Passed a better night, and is now more tranquil; takes food and physic voluntarily.—15th: Much improved.—16th: Comparatively rational: quiet in his demeanor.—August 18th: Is slowly recovering from a state of partial dementia.—October 3d: Discharged recovered.—Weight: April, 134 lbs.; May, 130 lbs.; June, 133 lbs.; July, 133 lbs.; August, 137 lbs.

CASE 7.—Maria P—, aged thirty-seven, married, house-wife, from Saddleworth, was admitted June 5th, 1871. Has had two children, the youngest of whom is now seventeen years old. No heredity; of temperate habits. Was under treatment in this asylum for an attack of acute mania from February 17th to October 9th, 1867. Grew excited eight days ago, after a short period of depression. Is now wild and ungovernable, dancing, singing, and raving. Seems to delight in movements and gesticulations, and puts forth much strength if interfered with. Ordered two drachms of succus conii every four hours.—June 6th: Half an hour after taking the medicine she becomes lethargic, then drowsy, and remains so for an hour. If roused, however, she is as noisy and exuberant as ever. Pupils of average size and equal; pulse 110; face pale.—7th: Quieter than when admitted, but when disturbed breaks out into maniacal excitement; any noise increases her vehemence.—16th: Quiet, but mischievous in a good-humored jocular

way; becomes excited whenever there is the least noise in the ward.—July 2d: Has gradually calmed down. To omit the medicine.—August 8th: Quite convalescent.—30th: Discharged recovered.—Weight: June, 106 lb.; July, 126 lbs.; August, 145 lbs.

CASE 8.—Fanny D—, aged thirty-five, married, house-wife, from North Brierly, was admitted May 8th, 1871. Her youngest child is fifteen months old. The violent death of a brother has preyed on her mind. A week ago she became suddenly excited, and has since been uninterruptedly noisy, violent, and destructive.—9th: Very noisy, talks incessantly and incoherently, and attitudinises. There is a diastolic murmur at the base of the heart. She is greatly emaciated, but active and vigorous. Ordered three drachms of succus conii thrice a day.—12th: Now composed and rational.—23d: Convalescent.—June 2d: Slightly despondent.—July 25th: Again quite convalescent.—August 1st: Discharged recovered.—Weight, May, 104 lbs.; June, 107 lbs.; July, 114 lbs.; August, 122 lbs.

CASE 9.—Ann S—, aged forty-five, single, house-wife, from Bradford, was admitted May 12th, 1871. After slight mental depression of a year and a half's duration, she became excited ten days ago. Is now talking perpetually in a loud, harsh voice, and will not remain in one place. She apparently understands what is said to her, but replies in unintelligible jargon. Face and head much flushed; pupils contracted; pulse 90; skin cool; tongue very foul. Ordered two drachms of succus conii every fourth hour.—16th: Still very maniacal; requires to be fed with the stomach pump. The dose of succus conii to be increased to four and then to six drachms.—18th: Now takes her food voluntarily; is much quieter, but talks incoherently.—19th: Quite rational; medicine only twice a day.—23d: Improving. To omit the medicine.—June 20th: Convalescent.—Sept. 4th: Discharged recovered.—Weight: May, 112 lbs.; June, 126 lbs.; July, 130 lbs.; August, 137 lbs.

CASE 10.—Elizabeth H—, aged forty-three, married, house-wife, from Huddersfield, admitted May 30th, 1871. Was insane for a short time three years ago. Has had six children; the youngest is now five years old. A brother and one of her own children have died of epilepsy, and one sister has had puerperal mania. The present attack commenced eight weeks ago, and has been characterized by gradually graverescent excitement.—31st: Excited and out of bed all night. Will not answer questions, and is very restless and fidgety. Fairly nourished. Skin of the face and fore-

arms bronzed. Ordered two drachms of succus conii three times a day.—June 1st: Has been quiet during the night, and continues so this morning.—9th: Convalescent.—Sept. 12th: Would have been discharged some time ago, but has been detained with her own sanction because of an attack of hepatic disease.—Nov. 7th: Discharged recovered.—Weight: June, 124 lbs.; July, 132 lbs.; Aug., 131 lbs.; Sept., 134 lbs.; Oct., 131 lbs.; Nov., 135 lbs.

On a future occasion I hope to have an opportunity of recording the results obtained in the treatment of certain mental diseases by conium in combination with opium and hyoscyamus.—*London Lancet, June, 1872.*

CASE OF DISEASE OF THE BRAIN—LEFT HEMIPLEGIA—MENTAL AFFECTION.—[Under the care of Dr. HUGHLINGS-JACKSON.]—A patient, 56 years of age. His mind is much impaired, but he has mind enough to frame delusions. A recent fancy is that he wishes to be killed. The most striking feature in his case has been an inability to recognize places and persons. At one time he did not know his own wife; he gave his watch away, and having wandered from home was unable to find his way back. But at the present time he is better, and can name things he sees in pictures, and can read. There seems now to be only a general imperfection of mind, hebetude, and slowness. His wife reports that he has called things by wrong names. Such blunders may arise either from non-recognition of the thing to be named, or from inability to find the name of it.

He has recovered from left hemiplegia—a symptom which, in the vast majority of cases, points to disease of the right side of the brain. In many cases of left hemiplegia there is no striking mental affection. But this patient's palsy was of the rarer kind, in which the leg is more affected than the arm. Troussseau has spoken of the evil omen of cases of hemiplegia in which the leg suffers more than the arm—or, rather, of cases in which the arm recovers, the leg remaining paralyzed. He appears to refer—in part, at least, to mental affections. Dr. Hughlings-Jackson supposes that the lesion in his patient is in the right posterior lobe. As there has been severe earache of the right side, and as there is deafness of that side, the lesion is possibly cerebral softening or abscess from plugging of veins. The hemiplegia came on after the earache, and after the onset of the mental symptoms: it was transitory, lasting about a fortnight.

From anatomical facts Dr. Hughlings-Jackson is led to believe

that the "important" part of the right hemisphere is the posterior lobe, whilst the "important" part of the left is the anterior lobe. But it must be remarked that in Rousseau's patient, and in a similar case from Dr. Ramskill's practice mentioned by Dr. Bazire, the hemiplegia was of the *right* side. However, Dr. Hughlings-Jackson thinks that there is more often mental affection, other than affection of speech, in cases of left than in cases of right hemiplegia, and particularly when the leg suffers more than the arm.

That the anterior and posterior lobes have different functions is certain as the convolutions of the two cerebral regions have different structure (Lockhart Clarke). Some years ago, Dr. Charlton Bastion expressed his opinion that the posterior rather than the anterior lobes are concerned in the highest intellectual operations. The following statement by Rosenthal is strongly in favor of Bastion's opinion:—"In the case of new growths in the posterior lobes the psychical disturbances are incomparably more frequent than in that of tumors of the anterior or middle lobes.

Dr. Hughlings-Jackson grants that the clinical evidence as to the greater importance of the *right* posterior lobe in mental operations is slender; but the anatomical facts (Gratiolet, Broca, and Barkow) are strong. (These facts he has several times referred to when speaking of the question of the supposed greater importance of the *right* posterior lobes in this journal, August 22, 1868, pp. 208-9; September 26, 1868, p. 358.) And the hypothesis may have at least this value: that it will lead to a careful study of the *kind* of mental affection—when there is any—which attends hemiplegia, especially when the leg is the limb more affected. We have many facts as to the kind of mental affection (aphasia) which so often attends lesions in the region of the *left* corpus striatum, and it is legitimate to inquire if there be not symptoms as *special* from lesions in the neighborhood of the *right* optic thalamus. The former, when speech is *lost*, consists in an inability to reproduce them in propositional order; but in cases of loss of speech—in chronic cases at least—there is no difficulty in the reproduction of images of objects. The patient can recognize handwriting, although he can not read; he can copy print into writing, but can not express himself in writing; he may be able to play at dominoes or cards. In these operations speech is not concerned; the operation of *another* series of sensori-motor processes is required. Dr. Hughlings-Jackson believes his patient has, or has had, defect in this other series—in the sensori-motor processes concerned in the *recognition* of objects, (not in *seeing* objects,) and in putting images of things

in "propositional order," so to speak. Such a defect, when extreme, would pass as one of imbecility, and in a minor degree as one of "loss of memory." Obviously, the investigation of such cases will be very difficult indeed.

Just as we compare and contrast the effects of plugging of the left and right middle cerebral arteries, so we should compare and contrast the effects of plugging of the right and left posterior cerebral arteries. Dr. Hughlings-Jackson, however, has seen but one case of plugging of the posterior cerebral artery; and as both the right and left, and also the right middle cerebral were plugged, the case, although there was mental affection, is not evidence either for or against the hypothesis he has put forward.

In the above remarks spectral illusions are not spoken of; but these, if the above hypothesis be correct, will depend on disease of the posterior lobe. The *disorderly* revival of images bears the same relation to *inability* to revive images as chorea does to hemiplegia—in the former there will be instability of nerve-tissue, in the latter destruction of nerve-tissue.—*Medical Times and Gazette.*

In the St. Louis *Medical and Surgical Journal*, for March, 1872, we find a communication by Dr. C. H. Hughes, Superintendent of the Missouri State Lunatic Asylum, upon "Psychological Medicine in our Medical Schools." We quote:

Psychological medicine is entitled to, and must occupy, as prominent a place in medical science, as the nervous system holds in anatomy and physiology.

Our medical schools all over the land should awaken to a full realization of the situation, and arouse to the discharge of duty. They should place psychiatry in its proper and legitimate attitude before the whole profession. The nature and treatment of all the various forms of insanity and its jurisprudence, should be thoroughly taught at the fountain source of professional knowledge.

Some of the American schools of medicine have already taken steps to discharge this legitimate and long-deferred duty; among them, the medical department of Harvard University, and one or two of the schools of New York and Philadelphia.

Let us hope that their example may be followed by every respectable medical college in the Union, until diseases of the nerv-

ous system, accompanied with mental aberration, shall become as thoroughly familiar to the general practitioner, as those unaccompanied with derangement of the mind.

We note in this connection the appointment of Dr. J. R. Bauduy, Physician to the St. Vincent Asylum of St. Louis, to the Chair of Psychological Medicine in the Missouri Medical College; and that of Dr. John H. Callender, Superintendent of the Tennessee Asylum, as Lecturer upon Insanity, its Causes and Treatment, in the Medical Department of the University of Nashville.

We regret to learn that Dr. C. H. Hughes has resigned the position of Superintendent of the Missouri State Asylum. He enters upon general practice in St. Louis and will give special attention to the treatment of diseases of the nervous system.

Dr. T. A. Howard is appointed to the Superintendency made vacant by the resignation of Dr. Hughes.

—Dr. Merrick Bemis, the Medical Superintendent of the State Lunatic Hospital, at Worcester, Mass., has resigned, and Dr. B. D. Eastman, an Assistant Physician in the Government Hospital for the Insane, at Washington, D. C., has been appointed to fill the vacancy.

—DR. JOHN ORDRONAUx, with whose learning and intellectual gifts the readers of this JOURNAL have occasion to be familiar, is appointed, we are pleased to learn from the *College Courant*, of New Haven, one of the somewhat numerous Faculty in the Law School of the Boston University. If the whole faculty is composed of the same material with Dr. Ordronaux, it will be hard to compete with it. His practical legal training under such a lawyer as the late William C. Noyes, his various reading, his linguistic acquirements,

his fine scholarship, and his ready pen give him advantages that few men have for adorning such a position. It is perhaps more in the way of this JOURNAL to commend him because he is an accomplished medical scholar and medical jurisprudent, and a skilled man in two professions at least, which just now seem to depend very much on each other for assistance and counsel in criminal jurisprudence. It is a good and unusual thing to be competent in both.

To the Editor of the American Journal of Insanity:

CORRECTION.—In an article published in the April number of the JOURNAL on E. H. Rulloff, I said that “Rulloff wrote a criticism upon parts of Prof. Taylor Lewis’ edition of one of Plato’s dialogues, which interested Prof. Lewis and others in his scholarship.”

This I knew to be the case with reference to Prof. Mather, and I had been led by various circumstances to infer that it was also so, as a matter of fact, with reference to Prof. Lewis. He, however, requests me to state that I had no authority from him to make this statement, and assures me that it is incorrect. What interest he ever did take in Rulloff was in a wholly different way as he has shown in an article published in the *New York Independent.*

s.

—The Twenty-Sixth Meeting of the Association of Medical Superintendents of American Institutions for the Insane was held in Madison, Wis., on the 28th day of May last. It adjourned to meet in Baltimore, on the fourth Monday of May, 1873. The proceedings of the meeting will appear in the JOURNAL for October.

AMERICAN
JOURNAL OF INSANITY,
FOR OCTOBER, 1872.

PROCEEDINGS OF THE ASSOCIATION OF
MEDICAL SUPERINTENDENTS.

The Twenty-Sixth annual meeting of the Association of Medical Superintendents of American Institutions for the Insane, was held at Madison, Wisconsin, commencing at 10 A. M. of May 28th, 1872.

The Association was called to order by the President, Dr. John S. Butler.

The following members were present during the session.

Dr. J. P. Bancroft, Asylum for the Insane, Concord, N. H.

Dr. C. K. Bartlett, Hospital for the Insane, St. Peter, Minn.

Dr. D. R. Brower, Eastern Lunatic Asylum, Williamsburg, Va.

Dr. John S. Butler, Retreat for the Insane, Hartford, Conn.

Dr. R. G. Cabell, Jr., Assistant Physician, Central Lunatic Asylum, Richmond, Va.

Dr. J. H. Callender, Hospital for the Insane, Nashville, Tenn.

Dr. T. B. Camden, Hospital for the Insane, Weston, West Va.

Dr. H. T. Carriel, Hospital for the Insane, Jacksonville, Ill.

Dr. John B. Chapin, Willard Asylum for the Insane, Willard, N. Y.

Dr. Wm. M. Compton, Lunatic Asylum, Jackson, Miss.

Dr. John Curwen, Pennsylvania State Lunatic Hospital, Harrisburg, Penn.

Dr. T. P. Dudley, Jr., Assistant Physician, Eastern Lunatic Asylum, Lexington, Ky.

Dr. J. T. Ensor, Lunatic Asylum, Columbia, S. C.

- Dr. J. J. Fuller, Assistant Physician, Lunatic Asylum, Raleigh, N. C.
- Dr. John P. Gray, State Lunatic Asylum, Utica, N. Y.
- Dr. Wm. Hamilton, Assistant Physician, Western Lunatic Asylum, Staunton, Va.
- Dr. W. W. Hesler, Assistant Physician, Hospital for the Insane, Indianapolis, Ind.
- Dr. C. H. Hughes, State Lunatic Asylum, Fulton, Mo.
- Dr. Edwin A. Kilbourne, Hospital for the Insane, Elgin, Ill.
- Dr. Thomas Kirkbride, Pennsylvania Hospital for the Insane, Philadelphia, Pa.
- Dr. Henry Landor, Lunatic Asylum, London, Ontario, Canada.
- Dr. J. M. Lewis, N. O. Lunatic Asylum, Newburgh, Ohio.
- Dr. A. S. McDill, Hospital for the Insane, Madison, Wis.
- Dr. Charles H. Nichols, Government Hospital for the Insane, Washington, D. C.
- Dr. R. J. Patterson, Bellevue Place, Batavia, Ill.
- Dr. Wm. L. Peck, C. O. Lunatic Asylum, Columbus, Ohio.
- Dr. Mark Ranney, Hospital for the Insane, Mt. Pleasant, Iowa.
- Dr. D. D. Richardson, Department for the Insane, Almshouse, Philadelphia, Pa.
- Dr. Henry Riedel, Emigrant Hospital for the Insane, Ward's Island, N. Y.
- Dr. John W. Sawyer, Butler Hospital, Providence, R. I.
- Dr. A. M. Shew, General Hospital for the Insane, Middletown, Ct.
- Dr. G. A. Shurtliff, Asylum for the Insane, Stockton, Cal.
- Dr. Charles W. Stevens, County Lunatic Asylum, St. Louis, Mo.
- Dr. Wm. T. Steuart, Maryland Hospital, Baltimore, Md.
- Dr. E. H. Van Deusen, Asylum for the Insane, Kalamazoo, Mich.
- Dr. C. A. Walker, Lunatic Hospital, Boston, Mass.
- Dr. Joseph T. Webb, Longview Asylum, Cincinnati, Ohio.
- Dr. James W. Wilkie, State Lunatic Asylum for Insane Convicts, Auburn, N. Y.
- Dr. Joseph Workman, Asylum for the Insane, Toronto, Ontario, Canada.
- Dr. Joshua H. Worthington, Friend's Asylum, Frankford, Philadelphia, Pa.
- Dr. James H. Woodburn, Indianapolis, Ind.
- Also,
- Dr. Genet Conger, Trustee, Willard Asylum for the Insane, Geneva, N. Y.

The minutes of the last meeting were read and approved.

Letters were read from Drs. DeWolf, Earle, Barstow, Harlow, Stribbling and Parsons, expressing their regret at being unable to attend the present meeting.

On motion, it was

Resolved, That the Board of Charities of Wisconsin, and the members of the medical profession of Madison and its vicinity, be invited to attend the meetings of the Association.

On motion of Dr. Walker it was resolved that the President be requested to appoint the usual Standing Committees.

These were subsequently announced as follows:

Committee on Business: Drs. McDill, Walker and Curwen.

Committee on Time and Place of next Meeting: Drs. Kirkbride, Steuart and Shurtleff.

Committee on Resolutions of Thanks, &c. : Drs. Gray, Bartlett and Callender.

Committee to audit the Secretary and Treasurer's accounts: Drs. Brower, Lewis and Stevens.

On motion, it was

Resolved, That the Association take a recess of fifteen minutes, to enable the Committee to arrange the business of the Association.

After recess, the Secretary read invitations from the Faculty of the University of Wisconsin to visit that Institution, also to visit the rooms of the State Historical Society, and the Soldiers' Orphans' Home.

The Secretary read the report of the Committee on Business, which was accepted, as follows:

The Committee on Business recommend that this morning be devoted to the reading and discussion of such papers as may be presented; that the Association spend from two to three o'clock this afternoon in visiting the rooms of the State Historical Society in this building; that a session be held from three to six o'clock,

and at $7\frac{1}{2}$ P. M. this evening. On Wednesday, a session at 9 A. M., and in the afternoon at $2\frac{1}{2}$ P. M., visit the Hospital and return. On Thursday meet at 9 A. M., visit the University of Wisconsin, and hold a session at $2\frac{1}{2}$ P. M., and also at $7\frac{1}{2}$ P. M.

On Friday, the business to be announced at a future session.

The President introduced to the Association, Rev. A. H. Kerr, of St. Peter, Minnesota, Secretary of the Board of Trustees of the State Hospital for the Insane, and Dr. G. Conger, Trustee of the Willard Asylum for the Insane, Willard, N. Y.

The Committee on Business reported that the next business was the reading of a paper by Dr. Curwen.

Dr. CURWEN. Mr. President: Before commencing the reading of the paper, I would state that more than a year ago, I was requested by the county medical society, of which I am a member, to prepare a paper for them on the subject of insanity. That paper I have prepared in part. The portion that I have written I have read to that society. I brought it here more for the purpose of having the criticism of the members, to enable me to put it in better shape afterwards, than from any benefit I could expect them to derive from the reading of it. The paper is on the "Diagnosis and Treatment of Insanity," which was the subject proposed to me, and I have been able to carry it only through the treatment of mania.

Dr. Curwen than read the paper. (The paper will not be published until fully completed.) Discussion on the paper being in order,

Dr. KIRKBRIDE said: I do not know that I have anything in particular to say, Mr. President, except to commend Dr. Curwen, not alone for his present essay, but for his labors during several years to bring the medical profession to a full appreciation of the importance of a general understanding of the nature of insanity, and of making ample provision for all the insane. Those who live in Pennsylvania, know perfectly well, that all the success that has resulted from the labors of the friends of the insane, and all the good points in the recent acts of the Legislature, are due almost

entirely to the action of the State and County medical societies, adopting the suggestions of our own Association, and urging them upon the attention of the Legislature. This action of the medical societies, as bodies, and that of the individual members, have exerted a most salutary influence; and I have every reason to believe, that if perseveringly continued, we shall be able, in a few years, to say that Pennsylvania has ample accommodations, of a proper kind, for all the insane of the commonwealth.

Dr. CURWEN has done a good work in all these proceedings; and in various ways he has urged forward very successfully, the good work to which I have alluded. Among his other efforts, has been the preparation of papers, like that which he has read to our Association, this morning. I will only add, that just this kind of work can not be too cordially commended to every individual member of this Association, and if persistently followed up, it will not be very long before we shall be able to answer affirmatively, the often repeated question, whether it is possible to make hospital provision for all the insane in the country. I have never entertained a doubt on this subject. All that is wanted is, that proper information be imparted to the medical profession, the people, and the Legislatures of the different States; and it is only in this way, that the results, we are all so anxious for, can be brought about.

Dr. BARTLETT. I think it is a very proper paper to be read, certainly before a county society.

Dr. GRAY. I was not here at the commencement of the reading, and I asked Dr. Webb as to the title of the paper. Just as I came in, Dr. Curwen was speaking of transitory mania, of what I suppose was a description of that form of disease. Am I right, Dr. Curwen?

Dr. CURWEN. No, sir. I merely alluded to that form of disease.

Dr. GRAY. He, among other things, alluded to Dr. Jarvis' paper in the JOURNAL OF INSANITY, as illustrating not only the existence of transitory mania, as an actual and special form of insanity, but as showing quite conclusively that such a form was recognized by the profession, and added that there had been over a hundred cases recorded.

I take it that among the important questions now before our specialty, and the profession generally, is that of the nomenclature of insanity, particularly in regard to criminal jurisprudence. All of us who have been called upon to act as experts before courts, know how difficult it is to avoid the designation, in any case, of the actual form of insanity, under which the person may be labor-

ing. The public seem to think that insanity is some sort of entity which the Doctor must especially describe; and they appeal to the books and find so many forms of disease as to cover every possible case of insanity, or any possible case of erratic conduct, or any act of a criminal character.

Now I have carefully examined the paper of Dr. Jarvis. I directed its publication in the JOURNAL, with the distinct knowledge, that while it was a pretty strong plea in favor of the case of Deacon Andrews, tried in Massachusetts, it was nevertheless not a strictly scientific paper; not a paper that dealt in such absolute verities as science demanded in regard to a point about which there could easily arise differences of opinion from observations. A number of cases given by Dr. Jarvis are not fully reported, and there are some of them so reported, (I am sorry Dr. Jarvis is not present to hear what I say on the subject) as to leave out essential elements which characterize that so-called form of disease.

Mania transitoria (if we are to exalt a certain group of symptoms of mania into a special form) has been well delineated by symptoms by modern writers, and in instances, as in the case of Marc, among older writers, who believe firmly in the possible existence of this as a form of disease.

Dr. Jarvis gives the general remark with which Marc opens the chapter upon transitory insanity in his work, as conclusive, and as comprehending the whole subject—that it is a form of insanity that appears suddenly in persons not supposed to be insane at all before, and that it runs a rapid course and subsides. That definition would be sufficient to cover any case of crime that may be brought up. But it is not a comprehensive or accurate representation of what is given by Marc* on the subject. His work was published more than thirty years ago. The chapter upon that form of insanity embraces certainly two or three hundred pages of his work. He groups within that expression a large number of cases of epilepsy and epileptic mania. Maniacal attacks which accompany epilepsy, are often of brief duration. Occasional attacks accompanying epilepsy are also preceded by congestion,—sudden congestion of the brain, also may be occasioned by heat, in which there is very sudden and violent delirium, and which often terminate within a very few hours, in recovery. Marc gives a large number of cases, and as typical ones he gives certain cases of mania, in

* "Rapports Medico Judiciaires." Chap. xvii: "De la folie transitoire ou passagère."

which there have been acts of violence which seemed to mark the culmination of the paroxysm. One or two of these, Dr. Jarvis has given in that paper; leaving out of one of them especially, very essential points in the description of the case. In one case, for instance, Dr. Jarvis states that in the afternoon or evening the patient became quiet. The case, as Marc states it, is as follows:

A shoemaker, 35 years of age, of sober and industrious character, rose early on the 12th of April, for the purpose of going to work; soon after, his wife was struck by the incoherence of his speech and his wild looks. Seizing a knife, he rushed upon his wife for the purpose of killing her. The neighbors interfering, could, with great difficulty overpower him, as he defended himself with his knife. His face was suffused, pulse frequent and somewhat full, tongue clean, abdomen soft, and body bedewed with perspiration. His looks were fierce and his eyes flashing.

After noon, he became calm and slept pretty well. At evening he had recovered the full use of his faculties, but did not remember anything that had transpired. (*Marc*: Vol. 2, p. 511. Obs. 204.) Dr. Jarvis leaves out the fact of sleep at the close of the paroxysm and the complete loss of recollection.

I speak of this, because in this form of disease, (if we are to accept it as a distinct form,) we must accept not these vague general expressions in regard to sudden rise and recovery, but we must come down to some definite symptoms by which we are to characterize such a form and separate it from a general class. When we speak of insanity, we embrace all forms; when we say mania, we embrace every form of maniacal character. When we say maniacal, we intend to group every case in which delusions and conduct of a maniacal character are manifested; but if we intend to put a certain class of cases into a specific form of mania, then we must guard that form by specific symptoms, and give its course, especially if it is to last only minutes.

While there are not many writers of the present time who believe in this form of mania, still there are several, and perhaps the clearest and most distinct account given, is by one of the most recent, one who is willing to adopt that special form, who presents his cases and argues their existence. This is Professor Kraft-Ebing, of the Strasburg University, and a man of practical experience with the insane. He gives some five cases which came under his own observation. I think his paper on the subject was written in 1870, at any rate, late enough to embrace the leading observations, as recorded, of all those who preceded him, and to

bring the subject down to a later period than any other writer. He describes it as a form of mania which is characterized by the suddenness of its appearance, by the great violence of the manifestations, both the mental manifestations and the muscular activity which accompany it; by the entire loss of appreciation of what is going on, or of time; by the loss of perception of the relations to surrounding persons and things, (not by unconsciousness;) by obliteration from memory of anything that occurred during the paroxysm. And he urges loss of memory very distinctly, so that that part of his life is, as it were, cut out of his existence, and after the paroxysm has spent its fury, either by violence, or the doing of some strange act, then terminating by a profound sleep. Now these are the characteristics of a few of Marc's cases, and he gives more than a hundred cases, embracing all the large group I have spoken of. He gives some that end in sleep.

Now, many of these cases that are recorded, and cases that have come before courts more recently, where persons have deliberately gone with instruments prepared for shooting their fellow men for a real or a fancied insult, are very unlike the cases of Marc or Ebing; cases where, immediately before and after the act, the person was sane and conscious, where the appeal to the court and jury was that the character of the wrong committed engendered insanity, which had instantly been fanned into transitory mania, on getting into the presence of the one doing the wrong. We have had three or four in New York within the past few years. After having committed the deed they are cool, calm, indifferent, and show no remorse. Well, but a motive behind it? They appeal to medical jurisprudence to prove that insanity was the cause of the crime; for after it there was no remorse, but a quiet indifference to the act that had been done. No physical symptoms are demanded. They easily make their case out, and the person is acquitted of the crime.

The shortest duration that Professor Ebing gives is twenty minutes. He says the physical condition of the person who has transitory mania, is that of temporary congestion, with reddened face, injected eyes, heat of head, a quick, feeble, or a full bounding pulse.

Now, if in the description of the cases in the paper of Dr. Jarvis, these essentials are left out, then the paper becomes merely a lawyer's brief or a lawyer's plea. It is a mistake to allow any form of disease, or any case of insanity, to be exalted into a special form, without giving a full characterization that may be known and read of all men.

Only a few days ago I heard a medical man declare on the stand, basing his knowledge on Dr. Jarvis' paper—on the point simply of the suddenness of the development and rapidity of the disease, and completeness of its cessation—that mania might be so brief as to come on in an instant, simply from seeing a person against whom you had some feeling that you had been wronged, and disappear instantly with the firing of a pistol or plunging of a dagger into his heart. Moreover, that the very act was not only the culmination of the insanity, but the cure of the disease. This was in a case where a woman prepared herself deliberately with a pistol, watched for her victim to enter a street car, walked into the car and sat down, looked the man in the face, spoke to him, and receiving, as she said, an insulting answer, shot him instantly. Further, he declared that that woman was sane up to the time the reply fell upon her ear; that the reply was the goad to the madness, which was instantly developed; that an irresistible insane impulse was aroused in the breast, not one of criminal intent and character, but one arising from the complete overthrow of the intellect, a form of insanity instantly developed under the circumstances in which she saw this man. Although she saw the smoke, saw the wound in his face, and saw the pistol and picked it up, adjusted it and fixed it back in its place; although thus instantaneous, this was insanity,—disease—and the shooting relieved the mind, and the person at once was well! That is just what these things, undescribed, lead to.

We can make no pleas to passion or sympathy as medical men, although it may be well for the lawyer to do it, and the more we divide and subdivide, unless we distinctly characterize each division and each subdivision of cases, we lay ourselves open to setting forth false doctrines and showing false lights, by which such medical men as I have spoken of are led honestly to declare such absurd opinions. I believe the Doctor was honest, and that he was led to believe in these things by these references, without any concomitant physical symptoms, and by the judgment of others older in the profession. Therefore, when Dr. Curwen says that transitory mania is too well established to admit of denial or question, I differ with him. If it is so well established by a hundred cases, then it is established sufficiently for us to recognize it in our experience. In our day it is well to give symptoms of the cases, and if Dr. Curwen has seen them and others of the specialty have seen them, we ought to be able to fill up the number to a hundred more. What is the need of carrying

down from time to time, the old cases the history of which we know nothing, if we do not in experience find verification. We are all living representatives of the specialty. I am not going to deny the existence of transitory paroxysms of insanity, either in epilepsy or in the frenzy of melancholia, or in ordinary cases of insanity, where paroxysms suddenly arise or suddenly disappear; but until I see more than I have yet seen, and until I read something more authentic than I have ever yet read,—authenticated by symptoms, I must fail to see insanity in any case which arises when the premonitory symptoms and the disease run the rapid course of a few minutes, when the person commits a crime and then is well.

In regard to established epilepsy, is it worth while to question any act of sudden violence as the possible result of this disease? The sudden maniacal paroxysm in an epileptic case is often merely a substitute for a fit. Epileptic seizures are often preceded or followed by a maniacal attack; but in many cases, a maniacal frenzy takes the place of an epileptic fit. It is well not to attempt to confuse medical men and theories by talking of those cases as transitory where disease of the brain is permanent. It seems to me when epilepsy is so established as to induce insanity, that the person is always insane, or, at least, of doubtful sanity. The insanity may be continued in the form of dementia or in paroxysms in association with epileptic attacks, or maniacal or epileptic attacks may alternate in the course of the disease.

In regard to the question of erecting any special mania out of cases associated with epilepsy, those cases stand on precisely the same footing as other cases of insanity: whether we are going to exalt this or that propensity developed in insanity, to a special place or class remains to be seen. There can be no objection to any number of manias if the cases are characterized, and each is to be appreciated and understood by symptoms, so that they will not be used to shield cases which are simply and solely those of crime.

Dr. PATTERSON. I was glad to see brought out so clearly the statement that if insanity is any thing, it is a disease of the brain.

A question arose in reference to points made by Dr. Gray as to whether the brain could be changed instantaneously, thus resulting in the overthrow of the mind. According to my observation, it is not the method of this disease to act so suddenly. I was glad to hear brought out also the fact that has bothered so many experts, that no man must be judged insane, as compared with any ordi-

nary standard of sanity, or as compared with other men, but as compared with himself alone at a former period of undoubted sanity. It seems to me important to bear this in mind, and that the line of demarkation is not a sharp one, but a diffused line, and there is debatable ground on either side of it. When a man becomes so markedly insane that we are able to place him over on the side that will justify us in giving an opinion and sustaining the plea of insanity, there is no difficulty. But in that debatable condition it is not more difficult to say that a man is sane than that he is insane. It is only where the case is a clear one, and he has passed that diffused line, that we are justified in giving a positive opinion, sustaining the plea of insanity.

Allusion was made by Dr. Curwen to the use of alcoholic stimulants in the treatment of the insane. For many years I have ceased to regard alcoholics as stimulants at all. I think it is a misnomer to call them stimulants from the fact that various observations show diminution of temperature under the influence of alcoholics, and the lowering of the circulation. If I would give them at all, it would be as sedatives and antiseptics.

In regard to the testimony of experts, I think it is unwise when upon the witness stand to say much about the various types and forms of insanity. I think they are important and useful as landmarks in the study of mental diseases, but are entirely worthless on the witness stand, and in fact mischievous. It is most difficult to fix a characteristic distinctive type and, as Dr. Gray has said, sustain ourselves. There are many other points of interest in that paper, and I, for one, feel obliged to Dr. Curwen for introducing it here for our consideration.

Dr. STEVENS. I must say that I am much pleased with the paper read by Dr. Curwen as an entire article, but am particularly pleased with that part—I hardly know how to designate it, unless as relating to moral mania or moral insanity, although not specially discussed under, or by those terms, it bears directly upon this subject. I feel a deep interest in this matter from the fact that I have recently had a severe test of my professional knowledge as an expert witness in a murder trial occurring in St. Louis, in which I maintained that the prisoner on trial was laboring under insanity. I wish that the views expressed by Dr. Curwen in this paper could be universally disseminated and understood, not only by the profession—alienist and medical,—but by the people at large. Our reputations and our motives would then be treated more leniently and charitably, and we would have better protection against those

who would malign us and destroy public confidence in our ability, our learning or our integrity. We go before the courts and the community, as far as I know, without fee or reward, and there are many instances where the good name of the individual or the specialty has suffered simply because we did an act of justice to the accused, or because we were not understood. I desire in this connection and by way of illustration, to call the attention of the Association to the case of Joseph H. Fore, the murderer of Munson Beach. I took the ground that this man was laboring under insanity, and I am glad to find that so many of the ideas presented in that paper will apply so well to the case I have mentioned. I would like to present some of the facts by reading a part of a newspaper article presenting the strong points of the testimony as given in the trial:

"Since the decision in the case of Joseph H. Fore, there have appeared a number of articles, written by persons who doubtless are sincere and honest in their convictions, and who fully believe they are infallibly just and correct in all they have thus put forth. Two preachers, also, have appealed in strong and eloquent language to the public. These writers and preachers have assumed the position that the murderer of Beach was not, and is not an insane man, and that the trial was a show—a farce—a mockery of law and justice. I am not intending to refute the reasoning of any one of these writers or preachers, unless my appeal to authority and facts should be so understood. Facts are stubborn things, and in this case the facts are very plain and very tangible. What is this moral insanity about which so much has been said? Let Henry Maudsley, one of the latest and highest authorities, answer. Under the head of moral insanity he says: 'It is difficult to induce the public to entertain the idea that moral insanity is any thing more than willful and willing vice. Much as the assumption of it as a disease has been reprobated, there can be no doubt that all the eminent men who have studied insanity, and whose authority we habitually accept, are entirely agreed as to the existence of a form of mental disease, in which, without any hallucination, illusion or delusion, the symptoms are exhibited in a perverted state of those mental faculties, usually called the active and moral powers, included under feeling and volition,—the feelings, affections, temper, habits and conduct. As however, feeling is more fundamental than cognition, the intellectual activity can not be entirely unaffected by it, though there may certainly not be any positive delusion; the whole manner of thinking and reasoning is tainted by the morbid self-feeling

through which it is secondarily affected. The patient may judge correctly of the relations of external objects and events, and may reason very acutely with regard to them; but no sooner is self deeply concerned, his real nature touched to the quick, than he displays in his reasoning the vicious influence of his morbid feelings, and an answering perversion of conduct; he can not truly realize his relations, and his whole manner of thought, feeling and conduct in regard to himself is more or less false.

It is where hereditary taint exists that we meet with the most striking examples of this kind of insanity, and those which often cause such great difficulties in medico-legal investigations. There is the strangest aversion on the part of the public to admit that an extreme hereditary taint may be a not less certain cause of defect or disease of mind than an actual injury of the head, and yet it is the fact. The hereditary predisposition to insanity signifies some unknown defect of nervous element, an innate disposition to irregularities in the social relations; the acquired infirmity of the parent has become the natural infirmity of the offspring, as the acquired habit of the parent animal obviously becomes sometimes the instinct of the offspring. Hence comes the impulsive or distinctive character of the phenomena of hereditary insanity, the actions being frequently sudden, unaccountable, and seemingly quite motiveless.

Appeal calmly to his consciousness, and the individual may, sometimes, reason with great intelligence, and seem nowise deranged; leave him to his own devices, or place him under conditions of excitement, and his unconscious life appears to get the mastery, and to drive him to immoral, extravagant and dangerous acts. He perpetrates some singular act of eccentricity because all the world will censure it, or even commits murder for the sole purpose of being hanged. It is worse than useless for a sound mind to attempt to fathom the real motives which spring up in a madman's mind; it is most unjust to judge his actions by a standard based upon the results of an examination of sane self-consciousness; to do so is simply to attempt to make coherency and incoherency, order and disorder, equivalent. Only long experience and careful study of actual cases of mental disease will suffice to give any sort of adequate notion of what a madman really is. When there is no hereditary taint detectable in a case of so-called moral insanity, it is necessary to traverse the whole physical and mental life of the patient, by a careful research into his previous history, and scrupulous examination of his present state."

Now apply this definition and this authority to the case under consideration. We might, if necessary, quote any amount of authority from Pritchard, Bucknell, and Tuke, and others, in relation to moral insanity. It was proved that Fore's father was a man of insane temperament, erratic, gloomy and morose; an uncle is now an inmate of the Government Insane Asylum in Washington; another uncle committed suicide in a fit of insanity; two of his cousins committed suicide. At the age of fifteen, Fore attempted to kill persons without any cause or provocation. At the age of seventeen, he imagined that his cousin was his wife, and because she refused to associate with him, he attempted suicide by throwing himself into a cistern. On another occasion he attempted suicide by shooting himself with a pistol. He attempted the life of his grandmother. He made frequent attacks upon persons in railroad cars and in other places, from mere imaginary insults. These facts were proved by the verbal testimony of two apparently very reliable men, who knew the whole history of the family, and by many affidavits. The testimony as to his conduct, language and deportment within a few days of the murder, was of such a nature as we might look for in any and all persons laboring under this form of mental disease. The testimony alone, of his mother-in-law, though she was called on the part of the State, went far to convince the medical experts of the existence of insanity. Several witnesses testified that, although they were on friendly terms with the defendant, his manner alarmed them as to their own personal safety. In Mrs. Fore's petition for divorce we have additional testimony: she says, "Fore would strike and fight others in her presence, without the slightest cause or provocation." That one evening, on the steps of the St. James Hotel, "he cursed her and shook his fist in her face, and without any cause or provocation whatever, becoming still more violent, slapped her in the face." That on the cars, he rose in his seat and said to a passenger: "Who are you looking at, you damned scoundrel and thief!" That he was "continually threatening to shoot, kill, and slay strangers, and other inoffensive and harmless persons." That on the steamer Olive Branch "he drew his pistol, and without any reason or cause, attempted to kill one of the passengers." On the same boat "he took off his coat and wanted to fight a drover who was a passenger." He, without any cause or provocation, in the city of New York, "struck and choked her, and struck her in the face." That in Olney, Illinois, "he struck and bruised her on the head with his fist." Here are facts enough, if facts of this kind are of any

account, in the question of this man's insanity. He was a drinking man, but not a drunkard. There were some of these acts committed when he was drunk, or at least under the excitement of liquor, but most of them when he was sober. Fore is an insane bad man, and a bad insane man; some are insane good men, and others good insane men; he is bad every way; a very dangerous man and totally unfit to be at large. He will certainly kill some other person, or he will kill himself. I told one of his counsel that if the defendant was cleared he should at once be confined in an insane asylum. It is not strange that the public mind is now sensitive upon the questions involved in these trials. Time and again the guiltiest of murderers have escaped punishment upon the plea of insanity. This is not one of that kind in any of its features. I wish that this Association, by some act, or publication of its sentiments, could in some way reach and correct the false ideas which so generally possess the popular mind in its conception of what constitutes insanity. Many of you have been called upon to give your professional opinion in exciting murder trials, and understand the ordeal through which one has to pass. In the case I have mentioned, I can not say that my reputation has suffered. Still, the sentiment of the community is divided in regard to the justice of the verdict. I think the people in general labor under a mistake in regard to the intentions of our specialty in this matter.

In this case three who were called as experts, testified, finally and decidedly, as to the insanity of the prisoner, and Dr. Bower, who was called on the part of the State, was compelled to testify and to come to the same conclusion.

The whole question of moral insanity is an interesting one, and demands thorough discussion and investigation. The popular sentiment, probably with some justification, is against our specialty, as well as against the medical profession, wherever the plea of insanity is urged in criminal jurisprudence, and I am really of the opinion that insane persons who may, by chance, kill a fellow being, are in great danger of being hanged.

Dr. PATTERSON. Does Dr. Stevens regard this man's mind or intellectual faculties as being unimpaired, and whole?

Dr. STEVENS. He was capable, while in jail, of holding a connected rational conversation, on almost any subject I introduced. I could not discover any insanity by conversation with him in his cell. He said he did not remember all the incidents of the attack on Mr. Beach. I will say that his memory and intellect were generally clear.

Dr. PATTERSON. A case without intellectual impairment, without any delusion of any account, relating to the passions and feelings, entirely and purely?

Dr. STEVENS. There was no delusion except where he imagined his cousin was his wife. He began to manifest singularity of conduct, when he was about fifteen years old, and this condition continued to the time of this murder.

Dr. HUGHES. What was his age when he imagined his cousin was his wife?

Dr. STEVENS. Seventeen.

Dr. NICHOLS. What is his age now?

Dr. STEVENS. Twenty-two.

Dr. WALKER. How long did he hold to that delusion?

Dr. STEVENS. But a short time, a few days or weeks.

Dr. PATTERSON. Do you believe if there had been no intellectual impairment whatever, that he would not have been able to correct his delusions?

Dr. STEVENS. I think he was able to correct his delusions, and certainly was able to correct them afterwards, because he married another woman.

Dr. PATTERSON. If there was no intellectual impairment in the case, what was the propriety of calling it insanity?

Dr. STEVENS. As I understand, or consider that form of insanity, I will say that although there may be intellect, first connected with the act, still there is an impelling force or power, which the individual can not restrain or resist; that is, which he can not control by his intellect. You can not call it delusion exactly, but this man had no moral perception or conception of right or wrong; want of will power might express the idea. From all the testimony, he never had, seemingly, any clear conception of right or wrong. He was a bad man naturally; no teaching, or training, or circumstances could have made him a good man; he inherited, I believe, what might be called an insane temperament.

Dr. PATTERSON. Was he a bad boy before he reached the age of fifteen?

Dr. STEVENS. I think no testimony was produced in reference to that period; he belonged to a family, strange or singular in various ways, as I learn from abundant testimony.

Dr. NICHOLS. I have the uncle of this man as a patient in the Government Hospital. I know nothing, however, of the family.

Dr. PECK. This question of transitory insanity is one that is of importance, not only to the members of this specialty, but also to

the medical profession at large; and there is one question in connection with it that I propose to speak of. I doubt whether we have what is termed transitory insanity as a *primary* attack of insanity. If we have transitory insanity—and I do not deny that we have—in my opinion it is *always* a secondary or subsequent attack. If there has been any record of the history of the individual, we will find that there has been previous mental disorder, a primary attack of insanity, more or less grave in its character, but sufficiently well defined to establish the fact. Such fact, if ascertained, is a landmark in the case for our guide. For instance, we are called to the witness stand, to testify in a case where crime has been committed, and the plea of transitory insanity is raised. If the case was one of transitory insanity, we would be able, doubtless, in almost all cases, to determine from the history of the case, whether there had been a previous attack of insanity or not. If there had been insanity in the case, that fact would, to my mind, be a strong point in favor of the attack of transitory insanity when the crime was committed. I believe that transitory insanity is comparatively rare, but in the absence of statistics on this point, this assertion is of little value. I wish gentlemen in the specialty would give us some statistics on this subject. This plea of mania transitoria is one of the important matters in connection with our specialty, and is becoming more and more so every day. There are landmarks developing as we make progress in this specialty that enable us to make out our cases more clearly and definitely than was the case in former times, but there are not enough yet to enable us to make out all cases intelligently, conclusively and satisfactorily. We get along very well with the patients under treatment in our institutions for the insane, for we there have time to investigate whether the patient is insane or not, but it is when called upon to testify in the courts as experts, that gives us trouble. It would be very gratifying to me, if we had our landmarks so well defined that, after having arrived at all the evidence in a case, we could say promptly and satisfactorily, yes or no, sane or insane.

In my remarks upon this subject of transitory insanity, I exclude the insanity of epilepsy. A person suffering from epilepsy is often subject to sudden outbreaks of insane impulse. The subject under discussion, I suppose, to refer exclusively to idiopathic insanity.

Dr. CALLENDER. I thank Dr. Curwen for his paper, as one in a position requiring me to instruct others, generally, of the types, characteristics and usual treatment of insanity; it has certainly

given me hints in the performance of this task, and I think contains general information, which every physician, not in the specialty, should possess.

The discussion has taken a range not expected, and I am gratified at Dr. Gray's earnest and lucid protest against the latitude of the doctrine of mania transitoria. I have recently been called to confront this subject in the presence of a platoon of skillful lawyers, and was subjected to a searching direct and cross examination. In the verdict, the tenor of my testimony was set aside, and the party acquitted. The facts were briefly these : a returned soldier from the war in 1865, discovered, or thought he had, that the citizens of the place had debauched his wife. The parties quarreled, and after various threats of the party aggrieved, to kill the other, by the interference of friends, the matter was quieted, and amicable relations established. For nearly or quite four years, the parties living in the same village, met and interchanged greetings. The injured husband pursued his calling, living in apparent peace with his wife, and manifesting no evidences to his acquaintances of disturbance of mind or excitement, after the first subsidence. A slight unskillfulness in measurements was proved to have been shown on one or two occasions. Early one morning, the alleged seducer passed the place of work of the other, and, as he returned in a few moments after, he was shot down by the husband.

The theory of the defense was that the sight of the seducer excited a sudden insane and uncontrollable impulse to kill him—this too, after four years ! The party slaying escaped, but was quickly apprehended and was incarcerated until his trial. His conduct and demeanor afterwards was not that of indifference to the result, but an alert activity to escape the penalty of his act, and insanity was not indicated in any form by his appearance. I was called as an expert, and one after another of hypothetical cases were framed by opposing counsel and the eagerness of the defense would have carried the doctrine of insanity suddenly excited and as suddenly disappearing,—in other words, culmination and cure in the act—to an alarming point, and the result did so.

I concur with Dr. Gray that if an assembly of alienists are called upon to recognize this type of insanity, its advocates should describe it distinctly, that we may know its pathognomy. If it has the suddenly reddened face, the heated head, the quick bounding pulse that is asserted, let them adduce a sufficiency of well authenticated observations to establish it before we substantially admit that the poet's line, "anger is a short madness," means madness involving legal responsibility.

In regard to the case of Fore, alluded to by Dr. Stevens, if I may express an opinion, it would be that Fore, though he was probably an insane bad man, was, undoubtedly a badly insane man, and should have been in asylum confinement from the time he was fifteen years of age. I will not be led into the discussion of moral insanity, but I can not sit down without saying that a diseased perversion of the motions, affections and passions without mental alienation to the degree of moral or legal inaccuracy, is a phase of insanity not yet proven to me as possible, and as an humble member of this body, I must enter a protest against the latitudinarian views which are tending to shield the crime that riots in the land.

Dr. WORLINGTON. I think Dr. Curwen's paper an excellent one; and well calculated for the object for which it was prepared, to instruct the profession at large in the principles of the diagnosis of insanity. It is one that is much needed among the profession at large in our section.

Dr. RIEDEL. I can see no sufficient reason to set forth the so-called transitory mania as a distinct form of mania, and more particularly I do not see the possibility of distinguishing transitory mania from epileptic mania. The characteristics of transitory mania, as expressed by Krafft-Ebeng, seem to me decidedly to point to well-known features of epileptic results, such as the suddenness of invasion, the short duration of the attack, the atrocity of the propensities, loss of self-consciousness and memory during the attack and falling asleep after it is over.

Dr. COMPTON. I have no facts in my possession, nor have I any reflections to offer that would throw any additional light upon the various points raised in this discussion. I rise mainly to attest my appreciation of the very elaborate and well-written paper of Dr. Curwen. In his own compact and condensed style he has opened up the whole question of insanity, not only in its treatment and management in our hospitals, but he has brought to the floor the distinguished representative of that special part of our speciality which involves the matter of jurisprudence, Dr. Gray.

I have taken some notes, and did intend to offer a remark or two upon several points which were either directly or incidentally brought forward, but so many gentlemen of learning and experience have touched upon them before they reached my place in the class that I do not feel justified in infringing upon the attention of the Association. I would like, however, to ask just one broad question before I take my seat, and that is, do we recognize moral insanity or not?

Dr. KIRKBRIDE. Some do and some do not.

Dr. COMPTON. I should like to know what the sense of the Association, as a body, is.

Dr. KIRKBRIDE. If you read Dr. Ray's book, you have one view of it, and the *JOURNAL OF INSANITY* has another.

Dr. COMPTON. I have read both, and find that both of them contain a vast amount of sound logic and good sense. Time was when lawyers knew more about insanity than doctors, having had to deal with it in the civil as well as criminal courts. Of late, however, we are beginning to claim to know more about it than the lawyers do. In the celebrated case of Hatfield, who was tried for shooting at the king, in Drury Lane Theatre, Mr. Erskine added fresh laurels to his brow, and presented such a lucid exposition of doubtful insanity, that doctors themselves have not been ashamed to refer to it now and then in their teachings and writings. When that eloquent counsellor enforced upon the court the view that *delusion was the true test of insanity*, he struck a key-note that, to a large extent, has shaped the music in criminal insanity ever since.

Dr. Patterson seemed to enforce the idea that there could be no insanity without intellectual derangement. Now I would like to know, and the purport of my question is to ascertain the sense of this Association as a body, though I do not know the best method of bringing the Association to a decisive expression of its views in a collective way. I think there is an emotional insanity,—an affective insanity, if you please,—call it moral or immoral, as you choose. [Laughter.] I am not inclined to believe that there was much intellectual insanity in the Rulloff case, the McFarland case, the Fore case, nor the Deacon Andrew case. The principal interest I have in the question at this time is not only in the consideration that we are learning to treat insanity as a disease in our hospitals, but because the discussion presents a promise that at some time or other,—I hope at no distant day—doctors may be able to *untangle* themselves when they come before the courts,—and will know what to say when they get there. I do not believe the Association does. [Laughter.]

In regard to epileptic insanity I have not a word to say. The Doctor has written an admirable paper on the subject and I am obliged to him for having read it.

In conclusion, I can only repeat the expression of the hope that when we do enter the domain of medical jurisprudence, we may all go together, each backed by the other.

Dr. HUGHES. I would say in regard to the general tenor of the doctor's paper, that I believe it is in accordance with the views commonly entertained by the profession, so far as the treatment is concerned.

I take exception to one remark, however, in the concluding part of his paper, that the Hospital is the only place for the proper treatment of the insane. While I would not go so far as some alienists have lately gone on this subject, nevertheless, in my opinion, there are cases which may be better treated without than within an asylum; a small proportion, however, of the cases which come under our observation in asylums.

The definition of insanity having came up for consideration, I suppose that which the doctor gives, having diseased organization for its basis, is probably the correct, as it is the almost universally received one at the present day. If we ever draw the true line of demarcation between insanity and crime and folly, it must be drawn upon the verge of diseased organization. There are as many varieties in insanity, said John Locke, as there are degrees of folly, and if we are ever to know where one ends and the other begins, especially for purposes of jurisprudence, we shall find it in diseased organization.

I believe in transitory mania. I do not believe in mania *transitoria*, characterized by premeditation and resulting from a motive, but I do believe in the possibility and probability of real transitory mania, or the mania of sudden and overwhelming impulse, as thoroughly as I believe in epilepsy or sudden cerebral congestion which may suddenly kill or lead to acts of sudden insanity. I believe in disease as the immediate cause of insanity. I believe in the sudden recurrence of disease. We have diseases of the heart and other physical organs which instantaneously take away life or indirectly disturb the functions of the brain. Why not a sudden cerebral disease,—concussion, congestion, or withdrawal of blood,—sufficient to cause transitory and immediate insanity. We do have these cerebral states and the resulting insanity is sometimes permanent.

I am not insisting that the majority of cases called transitory mania are really such. They often have their existence only in the lawyer's plea. I should hesitate long before pronouncing an absolutely motiveless act of homicide, a case of *sane*, rather than *insane* impulse. I believe, as Maudsley says, that there may be certain disturbances of the cerebral molecules—so disturbed by external or internal causes—as will result in the immediate outburst of in-

sanity; but I should be wary in coming to a conclusion in such a case. In a supposed case of transitory mania, I would search for those concomitants which indicate disease of the brain.

I would hesitate long before pronouncing a case transitory mania if there could not be found a preëxistent hereditary neurosis, or an accompanying heart affection, or organic disease elsewhere manifest; but I believe as thoroughly in the existence of such a disorder as I do in the existence of any other physical diseases.

I believe in moral insanity; of course our belief in the existence of this disease must depend somewhat upon our definition. We can not understand each other unless we understand alike our definition. I believe in disease of the emotions, propensities, impulses and passions, or rather in disease of the brain in which the mind is thus deranged in its manifestations. I believe in a form of insanity in which the intellectual functions are wholly in abeyance and apparently unimpaired. I am familiar with the case presented by Dr. Stevens, and whether the question be raised as to moral or reasoning insanity, I have no doubt whatever as to the insanity of Fore. I think when he was seventeen years old and imagined his cousin was his wife, that he was then a case of intellectual or delusional insanity and I believe the delusion was removed in a reasonable way.

There were facts in the case of Fore which went to establish the unrestrainable predominance of the emotions and impulses over the reasoning faculties. His reason was rather paralyzed than perverted at the time the homicidal act was committed.

Dr. BANCROFT. I am glad to join in the general expression of thanks to Dr. Curwen for the paper, and have no other remarks to make at this time, except to refer to an incident suggested by the remarks of Dr. Stevens.

In reference to the dividing line between moral and intellectual insanity, I imagine we would be relieved of much of our difficulty if we knew more of the actual working of the mind in any case in question. States, which for lack of that knowledge, are called moral insanity, may spring from concealed delusions, which, if expressed, would clear up the case.

Persons are often met with whose manifestations are such as to satisfy the expert of the existence of insanity, while yet it is very difficult to fix upon the specific symptom which would satisfy a jury; and the difficulty is increased by the coëxistence in the case, of many healthy mental processes. In many of these obscure cases, I have no doubt if a full expression of the thoughts could be

reached, the evidence of insanity would at once be complete. I recently met with a case which shows how this distinct evidence may remain concealed until brought out in some unexpected way. For many weeks very little tangible proof of insanity could be gained; nothing beyond a vague exhibition of eccentricity of manner, till, one day, the patient was asked a question in regard to the origin of a small tumor on her lip, when she replied, "my mother put it there; the angels gave it to her, and she put it there to know me by." In another conversation she said her "sister was a queen." And yet this person had not, for a long time, manifested any other proof of disease than moderately morbid states of feeling. Similar instances are frequent, and unless cleared up in some such manner, which they are by no means sure to be, for long periods cause no little vexation. I refer to them now only to suggest the probability that, in very many of the obscure and difficult cases found along the dim boundary of mental disease, and giving perplexity to experts, cases in which the moral sentiments only seem at fault. If we had the power to remove the veil which hides the actual processes, it would be found that underlying all, there are diseased intellectual operations.

Dr. WALKER. In common with others, I thank Dr. Curwen for his paper. I only hope he will give us the benefit of it when completed; and I hope he will go more into the treatment of exhaustive mania and epilepsy, for our own benefit as well as the ordinary practitioner.

In relation to this discussion, I am pained at what I believe to be a severe and unjust, and, what seems to be, an unkind criticism of Dr. Jarvis. While I believe in moral insanity, pure and simple, and transitory mania, pure and simple, I do not propose to discuss either now. I desire to say in regard to Dr. Jarvis, that in the trial of Andrews he was called on as an expert, and honestly advanced the opinion of transitory insanity, and was met with the denial that there was such a thing as transitory mania. The object of his paper was to meet that denial. I do not mean to be understood that it was a denial of the charge, but simply a resumé of the literature on that point. In regard to that I certainly think Dr. Jarvis was quite successful.

Dr. GRAY. Before the President closes the discussion, I would like to say one word in relation to the intimation of Dr. Walker, that is, that I disclaim any unkindness in any thing I have said towards Dr. Jarvis, and the very fact that I stated that I was

sorry he is not here, on that point I think precludes such an inference. But questions of this kind as to the transferrence of cases, is a matter of legitimate and proper criticism, and as Dr. Walker says, Dr. Jarvis was driven to make mania transitoria or nothing. I take it that this being driven to make a case is not in itself necessary; and whether the case of Andrews was one of insanity or not is the matter in issue. If he could not swear to it distinctly and announce the characteristic symptoms of that form of disease as laid down by those writers who had described it, then it was as unfair after to misquote cases in support, as by others to attempt to meet the denial of the literature of any such disease, whether driven to it or not. If a man is insane, he is insane: it is a matter of secondary consequence what form it takes; but the mere fact of some one denying the existence of transitory insanity, it could have no weight, because the question has been very largely dealt with in the current literature of insanity. The work of Marc from which Dr. Jarvis' case is taken was certainly published more than thirty years ago, and others have written largely upon the subject. The question was not raised and never should be whether a particular case was to be made out one of insanity or not, but whether a case presenting certain phenomena came within a certain recognized form of disease. I have no apology to make. I do not think any is needed.

Dr. WALKER. Dr. Jarvis' paper, as I said before, was not written to prove that Andrews was insane. He had previously taken the position that he was insane, and that it was transitory mania. Upon that point he was met by medical testimony—not lawyers—that there was no such thing, and no literature for it. The article published in the *JOURNAL OF INSANITY* was to show that there was literature on that point. It had nothing to do with Andrews at all, but to show that there were writers such as he claimed.

Dr. KIRKBRIDE. It seems to me that the gentleman from Mississippi, Dr. Compton, would be spared many of his difficulties, if he would avoid the term "moral insanity" entirely, and would not permit legal gentleman to draw him into any discussion on the subject. My view of the matter is that it is sufficient to say that the patient is, or is not, insane, and to give the reasons, if required, for such belief. I have always protested against being drawn into a discussion as to the nature or existence of "moral insanity" in these investigations, and have carefully avoided the use of that term. I mention this merely as a hint as to one of the modes of

keeping out of the particular difficulty alluded to by Dr. Compton.

Dr. COMPTON. I am obliged to Dr. Kirkbride. I read the gentleman's views in the medical journal, but then I can but remember that in Mississippi we doctors can not do as we please. When lawyers ask questions, we are required to answer in some shape, else "To be be put in our Little Beds" in jail for contempt. [Laughter.] I do not complain of having suffered in that respect myself at the hands of the lawyers; on the contrary, I have been fortunate in getting along very well with them. It is generally the case that the force and importance of the questions consist in the manner of putting them, and as doctors we would like to have them so presented to us as to enable us to avoid being compelled to reply "I don't know anything about it." I would like to know how to get around that mortification.

Dr. NICHOLS. Dr. Curwen's paper being upon the subject of insanity in general, has given rise to a wide range of discussion, in which, the essential nature of the mind and of its diseases has been to some extent considered. It is well known that the materialistic or physiological view of the nature of the mind has recently been given a prominence that it did not previously have, by the writings of Maudsley, our confrère Dr. Landor and others; and it seems to me due to the very great importance of the subject, that what I regard as the sounder and more philosophical view of it, should be more distinctly expressed than it has yet been in the course of this discussion. It is true that Dr. Curwen has in his paper briefly stated his views upon this question. I wish to express my concurrence in those views and to pursue the point a little further and more distinctly than he has done. We all agree, I believe, that the *brain is the organ of the mind*, to use the common language upon the subject,—that the mind is sound when and because those functions of its organ or agent upon which the mental operations depend, are healthy or sound,—and that the mind is diseased,—that is, irregular or unsound in its manifestations, because its organ or agent, the brain or some part or parts of it is diseased, or irregular in those functions upon which the mental operations depend. The disorder of the brain occasioning aberration of mind, may be strictly functional, or it may be associated with lesion of some part, or parts of the cerebral substance or of the substance of its membranes, when the disease is called organic. It may be a departure from a naturally healthy state of the brain, or the brain may have been unsound in substance or function from birth, and for all practical purposes,—for therapeutical and juris-

prudential purposes,—the healthy state of the mind or healthy mentality as the phrenologists say, is the result of the regular, sound physiological action of the brain; and mental aberration or insanity is due to pathological conditions of that organ or to unsound congenital conditions of it. To this point, I believe, we all go together, and from it some greater or less departures have been taken as I have said, which, as far as the great practical purposes of our science and calling are concerned, may be considered altogether theoretical; but for myself, in relation to the theories touching the essential nature of the human mind, I am glad that the observations and reflections of twenty-five years have confirmed and strengthened the views which my reading led me to adopt at the threshold of my experience in our specialty. I believe that the mind of man is an essential entity, that it is as self-existent as matter, and as distinct and different from it as inorganic matter is from mind; and that it is immaterial, because it has none of the properties of matter, except indestructibility. That, in brief, is my philosophy and my faith; and if the scientific doubts that now confessedly envelope this subject, ever give place to certain knowledge, I hope and believe that the philosophy and faith will be found to be not very far from the truth. It is obvious that there is not time to-day for an argument upon this question, though it lies at the very foundation of our science, if not of our practical duties.

In view of the turn that this discussion has taken, I can not refrain from remarking that it appears to me of the utmost moment, as a preparation for the grave exigencies of our calling, that we should possess perfectly clear and distinct views of the nature and operations of the human mind, and especially of the interdependence of mental manifestations and the functions of the brain. A clear understanding of the laws of mind in health will be found to be essentially necessary to success and credit in those investigations of aberrations of mind that have led, or are supposed to have led to the commission of criminal acts or to legal incompetence. A sound mental philosophy is to the practical psychist what the national or state constitution is to the legislator. A thorough knowledge of the fundamental law and a strict adherence to it is the only course that will lead to safe results in either case. In relation to transitory mania, so-called, I really doubt whether there is, or ever was, any mental idiopathy entitled to be considered a distinct form of disease, like mania for example, or melancholia, and to be called transitory mania. With Dr. Riedel, I am under

the impression that many of the cases that have been denominated transitory mania, have been epileptic explosions. In other cases, it seems to me that the brain had been in an unsound and generally very irritable condition, perhaps for a long time, when the conjunction of a slight access of disease and the opportunity, temptation or provocation, to which the individual was peculiarly susceptible, have led to one of those sudden and often terrible acts of violence which has constituted the only marked manifestation of insanity. In other cases, still, I have supposed that the sudden violence that has been attributed to transitory disease was really the revengeful explosion of a violent, ungoverned temper when crossed in some way. If the mind were sound, the provocation would not excuse the violence; but the person committing it should be held responsible for it. I am, perhaps, as ready as Dr. Gray, or any body else, to repudiate the attributing of a homicide to insanity, in those cases in which the homicidal act is at the same time the only evidence, the consummation and the cure of the disease. I have been of the opinion for many years, that cases occur that may at the outset, fairly and scientifically, (I am now talking to you as scientific men, not as theologians,) be denominated moral insanity. I also think such cases infrequent, and that in most cases of the kind, the disease soon involves more or less of the intellectual faculties. Therefore, I agree with Dr. Bancroft that in most cases that have been denominated moral insanity, if we could know the real condition of the intellectual faculties we should find that they were more or less affected. But it is evident to my mind that cases have run on for years under the observation of competent men, without the discovery of any intellectual lesion whatever; and from such experience it is a fair presumption, I think, that there are cases that we may properly denominate moral insanity. It seems to me equally evident that the cases are pretty common in which the intellectual faculties are alone manifestly involved in the disease. In a philosophical light, to deny that we may have purely moral or purely intellectual insanity, amounts to a denial of the broad distinction that is usually made between the affective and reasoning faculties of the mind. I am not aware that such a denial has been put forth in any of the discussions bearing upon this subject that have taken place in this Association, but it is frequently made in other quarters. Like Dr. Kirkbride, it has been my practice, in courts, to avoid as far as practicable, nice distinctions in respect to the form of insanity with which a party was affected. I have endeavored to adhere to the reason, why I thought

the person deranged, and if it was required, as it usually has been, to the relations I thought the supposed disease and alleged crime or incompetence bore to each other. I have gone so far as to say that the motive or affective faculties appeared to me most disturbed, but have hitherto avoided the discussion of the question of moral insanity, or denominating a particular case one of moral insanity.

Dr. Stevens has referred to a subject of very great importance to humanity and science, and to the reputation and usefulness of our calling. I refer to the existing popular prejudice against the plea of insanity in criminal cases based on the suspicion that rogues are often shielded by the use of that plea from the punishments they deserve. Now, I think we should be at once greatly relieved of that prejudice were the facts in the case generally known and appreciated. In the celebrated Huntingdon, Cole and McFarland cases no member of this Association testified at all either way; and in more than one of those cases, I myself know, that experts of standing were urged to appear on behalf of the prisoners. Indeed, I think we well may be proud of the fact that in no case that I have heard of, in which the plea of insanity has manifestly been raised merely as a means of screening a sane prisoner from punishment, has any member of this Association had any part or lot in the matter; and in very few cases which ultimately proved doubtful, has a medical man who could fairly be considered an expert, testified to the insanity. One of the best things,—probably the very best thing,—we can do to set ourselves right before the community in this matter, would be to spread as widely as possible the declaration on our part that no person who has been acquitted under a charge of murder, on the ground of insanity, should be allowed to at once go at large.

The interest of the community in this question is purely selfish. People do not like to have insane homicides set at liberty and given the opportunity to kill somebody else. Here is where the shoe pinches, and people are right in their fears and sensibilities upon this subject. Assure them that homicides will be kept where they can do no more harm, and they will scarcely care how many are relieved of the ignominy of crime by the plea of insanity. If an honest, right-minded man becomes insane and kills somebody, justice to him does not require that he should at once be given his entire liberty. It is only reasonable that he should share the consequence of his misfortune, when by doing so he will both promote the welfare of other unfortunates like himself and the peace and

safety of the community. But the fact is, a great many really insane homicides are bad people. They never were honest, self-governed, law-abiding people, and ought to have been restrained of their liberty long before they had taken the life of a fellow being. Science and humanity lose as much by hanging such people as by hanging honest men; and they lose scarcely less when such people are set at liberty immediately after science has shielded them from the ignominy of criminal acts. What length of time persons acquitted of criminal acts on the ground of insanity should be restrained, and by what authority they shall be set at liberty, or whether they shall be set at liberty at all, are subordinate questions which I will not now occupy the time of the Association in discussing. These are brief expressions, for what little they may be thought to be worth, of my opinions upon several subjects closely connected with the welfare of our calling, and in relation to which the public mind is more or less deeply exercised at the present time.

Dr. CURWEN. I do not rise to correct my own mistakes. This paper was read for the purpose of producing discussion. It was written as a record of my own experience without quoting the authorities, or consulting them on difficult points, because those who requested me to write the paper wanted something more concise and practical. I did not touch upon the subject of moral insanity, but simply referred to certain symptoms which accompany certain disorders, reserving the description of moral insanity to a later period.

Dr. Hughes says he does not agree with the concluding part, where I recommend all patients to be sent to hospitals. I must have read the concluding part of the paper incorrectly, because I had written "except a few cases;" for I believe that a few patients can be treated as well outside of hospitals as in them.

I do not consider alcohol, used as I have recommended, as a stimulant at all, but as a tonic.

The paper presents, I know, a very imperfect view of the whole subject. I brought it here merely to have the opinions of the members upon the points presented, that I may receive instruction and be able to elaborate it more fully.

I hope to present a paper on the other branches of the subject at a future meeting of the Association, and also to make the part now read more full and detailed on certain points which I have not yet had leisure to discuss as I could desire.

The PRESIDENT. I will thank Dr. Curwen, not only for this paper, but for this most useful and excellent discussion which has grown out of it. I trust he will do himself the justice, and us the favor, by concluding the paper.

The paper of Dr. Curwen was then laid on the table, and, on motion of Dr. Bancroft, the Association adjourned to meet at 2 P. M.

AFTERNOON SESSION.

May 28, 1872.

After visiting the rooms of the State Historical Society of Wisconsin, the Association was called to order at 3 P. M. by the President. The President introduced to the Association Mr. M. L. Fisher, President of the Board of Trustees of the Iowa Hospital for the Insane.

Dr. PATTERSON. I would announce that Mr. Fisher is the oldest trustee of a hospital in the United States, having known him as such thirty-three years ago.

The PRESIDENT. And I will venture to add that, like old wine, he is as good as he is old.

The President also introduced Dr. Brown, of Madison, Wisconsin, Messrs. W. R. Taylor and E. W. Young, Trustees of the Wisconsin State Hospital for the Insane, and Dr. John Faville, President of the State Medical Society of Wisconsin.

The Committee to audit the accounts of the Secretary and Treasurer reported through their chairman, Dr. Brower, as follows:

MADISON, Wisconsin, May 28, 1872.

The Committee to audit the Treasurer's account have the honor to report as follows :

Your Committee have examined the Treasurer's accounts and the accompanying vouchers, and find to the debit of the treasurer two hundred dollars from assessments. On the credit side of the account they find as follows :

By cash due from last settlement,.....	\$8 08
" " paid H. C. Demming, reporter,.....	167 50
" " " for postage,.....	13 44
" " " Theo. T. Scheffer, bill for printing,..	56 25

	\$245 27
	200 00

Balance due the treasurer,.....	\$45 27

The Committee recommend an assessment of five dollars as necessary to meet the indebtedness and expenses of the Association.

Respectfully submitted,

D. R. BROWER,
J. M. LEWIS,
CHAS. W. STEVENS.

The Committee on Business reported that the next business in order was the reading of a paper by Dr. Gray.

Dr. Gray then read a paper on the Causes of Insanity.

Dr. NICHOLS. If I were to express my views upon the subject of Dr. Gray's paper, I should modify his language, rather than his ideas. As I said this morning, it appears to me that insanity is frequently due to moral causes, and to say so is sufficiently near the truth for practical purposes. Writers on the etiology of diseases speak of their remote and immediate causes, and if you aim at the strictest accuracy, you should say that the moral causes of insanity are remote, because all insanity is immediately due to a physical cause,—the unsound condition of the brain,—the moral cause of insanity must always be remote or indirect, because it must derange the mind by first deranging the cerebral functions.

Dr. SHEW. This question is one of so much importance that I feel very reluctant to attempt to make any extended remarks. It is one which requires study, and one to which we have all probably devoted more or less thought, particularly during the last few years. Those who have read the *American Journal*, as well as the foreign periodicals, must have had their thoughts directed to this one idea, more than to almost any other during the past three or four years. The paper which was read last year by Dr. Wilbur, and since published in the *Psychological Journal*, took nearly the op-

posite view to that advanced in the interesting paper read by Dr. Gray; and it is a question in my mind, or has been, just where we ought to draw the line. I acknowledge freely that the more I study this branch of the subject, the more I am inclined to approach the point which Dr. Gray has already reached, and yet I can not bring my mind to acknowledge that all causes of insanity depend directly upon physical changes of the brain. No, perhaps I ought not to say that; I believe that all cases of insanity are the result of certain changes of the brain; but at the same time those changes may be produced by moral causes just as directly as by physical causes. Perhaps there is a small proportion of cases of insanity where we can trace to a direct moral cause. It seems to me we should be denying to the intellectual, the higher power of man, the influence which it certainly has upon the physical organization. I think you will all acknowledge the great and powerful influence which the mind has upon digestion, respiration, and some of the other functions. Why may it not also be a cause in producing physical derangement of the brain and nervous system? We all admit the power which mind has upon mind, the influence that a public speaker has upon his audience, and the very great influence and power which eloquence has to produce emotions of pleasure and emotions of pain. It may produce emotions sufficiently strong to interrupt the natural functions of the human body; appetite is lost. The news of a great defeat during war reaches the city. The people have been watching the result and know that a great battle was impending. Suddenly comes the news of utter defeat or ruin. No one thinks of his dinner, and all desire for sleep is gone. It is impossible to go to rest. In this case is it not mental emotion which regulates the circulation of the brain? Is it not as much a cause as when a man receives a blow from some heavy weapon producing a disorganized state? Most certainly. It is generally conceded that the late physiological investigators have come to the conclusion that nervous disorders depend more particularly upon the blood supply in the brain. Dr. Lockhart Clarke's papers during the last three or four years have pointed in that direction, and show that in nearly all cases of functional derangement of the brain, there may not be changes in the nerve cells, but simply in the supply and the quality of the blood which is sent to different parts. If that be the case, most certainly we can recognize a moral cause, producing a physical change, being really the first cause; producing, as Dr. Nichols says, derangement of the nerve cells; when long continued, a condition of chronic brain disorder.

Dr. HUGHES. I think this whole question in regard to moral and physical causes of insanity, depends altogether upon what we determine insanity to be. If we consider it a changed state of the physical organization of the mass of the brain, and go no further, then we shall have to discredit a large proportion of those causes which we term moral. But if we define insanity so as to include those precedent molecular changes which take place in the brain and its circulation, upon which the change of the structure of the brain itself is dependent, the isomeric and chemical states of the molecules of the brain, then we must admit that the question of moral causes plays a very important part in the production of insanity. It all hinges on what we define the disease. It is very true that in a very large proportion of the cases which fall under our observation, we can detect changes of the physical organism. We have the toxicohæmias and cacæmias, changes of the blood resulting from poisons. We have also the anæmias and hyperæmias. These changes act as the direct structural causes of insanity, like the changes to which Dr. Shew has alluded,—changes of the heart's action, changes of the chemical condition of the blood, which immediately effect the condition of the nerve cells of the brain. But I believe in the potency of what is termed moral causes, not only the slow moral causes which produce molecular changes, resulting in changes of structure and causing deranged mental manifestation; but I believe that moral causes may be so sudden and overpowering as to produce important structural changes of the brain and consequently all the manifest symptoms of insanity.

Dr. KILBOURNE. I understand from Dr. Gray's paper that insanity is always the result of physical disease and may always be discovered in the brain or nervous system. I would like to ask the doctor if he has found it so always in his own examinations,—whether in all autopsies that he has made or seen made, he has found a demonstrably clear and distinct lesion of the nervous centres,—a departure from the line of health, and that departure recognizable, either to the naked eye or under the microscope, as a lesion characteristic of insanity?

Dr. GRAY. The statement of Dr. Brigham that he always found morbid changes in the brain or meninges, I fully endorse and confirm, by a large number of post-mortem examinations. In all cases, we have found evidences of disease of the membranes or brain, and usually of both. Still, it must be borne in mind in this connection, that most of these examinations are made in cases of

chronic insanity, and that we are by no means able to infer with certainty from changes then found, the starting point or character of the original lesion. The brain, in such cases, may have passed through consecutive morbid changes. The insanity may have commenced from a general or local congestion of the meninges or brain, due to a diseased condition of the blood vessels, or it may have followed a shock or great grief or pecuniary loss, occurring while the person was in a depreciated or anaemic state of body, and unable to bear the stress of trouble. For local or general hyperæmia may follow from strain and increased cerebral action under such moral influences, and thus the moral becomes the remote or inciting cause. Months afterwards other changes may take place, either in the blood or the blood vessels, or in the nervous element, or in all from neglect of treatment, or from improper care. Again, the brain may have been overworked just previous to the moral shock, as well as undernourished. In such cases, the congestion or hyperæmia may continue and spread, and the patient die, and examination reveal effusion or simple distension or fullness of vessels, to the naked eye. But in cases of sudden death in the acute stages of insanity, we have found congestion, and under microscopic investigation, often degeneracy of vessels and nerve element more or less marked. This degeneracy indeed may have been an antecedent condition to the congestion or hyperæmic state, which acts as the immediately exciting cause of the insanity. In every case, therefore, it is important to have a full history of the previous physical health for some time preceding the actual outbreak. With such information we may often be able to designate the initiative, and the successive pathological changes.

Dr. Hughes very properly states that the potency of moral causes is not to be denied. In the paper read they are not, but they are assigned their true relation as predisposing or inciting influences to the exciting physical conditions, which are the real potential causes.

The point I desire to make clear is this, that moral influences operate naturally on all individuals under the laws which govern the inter-relations of mind and body; that moral causes influence physical conditions, both in health and disease, as a fundamental law of being. That, as a general rule, grief, shocks, high emotional activity, &c., do not, in health, carry individuals beyond the limits of physiological action, or simple increased physiological activity; that to produce increased physiological action under emotion is normal, and that accompanying high psychic activity, even manifested in

intense, overwhelming grief, or furious passion, is not insanity,—we have not disease. Under moral influences, persons may pass a sleepless night, or many nights, and abstain largely from food, and yet insanity not occur. This is the ordinary experience of life. However, the physiological boundary may be passed, and as a consequence insanity ensue. Griesinger, in his earlier writings, was of the opinion that insanity originated most frequently from hyperæmia, as the primary condition; later, his clinical observations and post-mortem examinations induced the conclusion that anaemia was the primary departure, and the hyperæmia sequent. This hyperæmia, or state of fullness of vessels, is probably due to debility—a static congestion—and may be general, though more commonly local, whether in the membranes or cerebral substance. We do not often have a true venous congestion. We do often see a reddened face, skin cool or cold, pulse feeble and 65 to 70, bowels torpid, and a condition of mental confusion and bewilderment. These cases are liable to pass into permanent dementia. In such cases anaemia underlies the local, or general hyperæmia. The apparent congestion is due to vaso-motor defect from the general nervous enfeeblement. By increasing the heart's action, by stimulants, tonics and food, this state is relieved. This law of local congestion was long ago pointed out by Andral, and is as applicable to the brain and its membranes, as to the lungs, or any other parts of the organism.

I have, at no time, denied the power of moral agencies. On the contrary, I have assigned to them an important influence, that of exhausting the physical system, and thus causing disordered physical conditions from which may and does spring insanity. As to the power of mind over body, it is illustrated daily and hourly. The history of martyrdom is a striking illustration of the power of a moral idea over the sensations. The theory of an ancient philosophy was, that under this power bodily ills and pains could be contemned and despised. Indeed, the true theory of ordinary life is, that the body is the servant of the spiritual man, to do his bidding, whether in pleasure or in weariness of the flesh, only taking care that in using it abuse is avoided. It is therefore only when the physical fails or is overcome, and the actual structure is disordered, that insanity is initiated. And this occurs whether the vital tone is lowered through an enfeebled nervous system, upon lowered circulation, and consequent enfeebled or mal nutrition and assimilation, or where the nervous system is unduly stimulated, and the circulation thus increased and the fundamental

element rapidly proliferated, and finally nutrition and functional action impaired and the structure diseased.

Dr. COMPTON. I offer my small contribution to the general expression of thanks to Dr. Gray for his paper. I am not prepared to discuss the various points he suggests. Indeed, very few men could attempt to criticise an essay so thoroughly prepared, so well written, and backed by such authorities as the Doctor has brought to bear upon it. It contains in itself a very large amount of food for thought, and it is just such material as ought to go into print, to be studied at home.

Dr. WALKER. If the mind in itself is an entity, then what is manifest, we all know, through the brain, is material, and that, to a great extent its action must be controlled, modified and regulated by the condition of the brain. While I have no doubt that formerly that was too much overlooked and too little generally attached to physical causes, yet I think too much is now attached to the other extreme, in setting up physical as the sole condition of mental disease. I know that in our post-mortem examinations there are more evidences at the present day than ever before, pointing out changes of the brain as not only oftentimes the result, but the cause of mental disturbance; and yet I am old foguish and conservative enough to feel that there is great danger of overlooking the moral entirely, in our surprise and perhaps gratification at seeing laid out so plainly before us that which formerly was all darkness and conjecture. While I believe, sir, in the very great prevalence of physical causes in the production and continuance of insanity, I can not yet shut my eyes to the very material agency that moral causes have had, and always will have, in the production of insanity.

Dr. KIRKBRIDE. I do not know that I can add anything of interest to what has already been so well said. I should agree with Dr. Walker, I think, in regard to moral causes, and I can hardly conceive how any one can doubt their efficiency in the production of insanity. It seems to me every day shows us cases about which we can have no doubt whatever. I do not feel entirely sure that our friend, Dr. Gray, answered the gentleman who preceded him as fully as I would have liked him to do. In regard to post-mortem examinations in cases of insanity, I am sure that in many I have made with the utmost care, I certainly found some in which, with the most perfect instruments accessible to me, no change whatever could be discovered in the brain. Yet at the same time there could not be a particle of doubt as to the existence of insanity.

That insanity is a physical disease I have no doubt. But we all believe, I suppose, that there are cases of functional disease, of dyspepsia for example, where if the patient suffered sudden death from violence, no instrument would discover any change of structure in the stomach. I have no doubt whatever of *that*, and it is often exactly the same in regard to the brain in cases of insanity. The whole subject is one we have got to meet squarely and to look into much more than ever before. I concur generally in the views expressed by the writer of the paper.

Dr. GRAY. Did you intend to say that moral causes would produce insanity without disordered condition of the brain?

Dr. KIRKBRIDE. Not at all. Insanity is often however, a functional disorder of the brain, the same as dyspepsia is often a functional disease of the stomach.

Dr. GRAY. You and I agree exactly.

Dr. RICHARDSON. I have been connected with the Philadelphia hospital for about nine years, and have made many post mortem examinations during that time. I have failed in numerous instances to find organic lesion in individuals who have died insane, the brain having every appearance of those dead without intellectual impairment. I have often been puzzled in making examinations with the desire of finding some particular lesion differing from those found in persons not insane, and am sorry to say, have failed, even with the microscope. Moral causes probably have a great deal to do with the production of insanity; more perhaps than pathologists are willing to concede. The brain may be functionally disturbed, as the heart is in epilepsy and other diseases. None of us would be willing to say that a patient had cardiac disease because his heart beat at one examination 120 and only 50 or 60 at the next. May it not be often the case, that some other organ is affected and by reflection produces functional disturbance of the brain resulting in insanity?

Dr. KILBOURNE. While I am generally willing to concede the correctness of the views advanced by Dr. Gray, and which he has so ably defended in his valuable paper just read, I can not shut my eyes to the fact that the same sources of information that have been open to one have been open to all—differing only in extent—and that the conclusions reached have not always been the same. I have in my mind now several cases, and two in particular, in which post-mortem examinations were made by me, assisted by various other gentlemen thoroughly educated in the use of the microscope,—one of whom had been a student in the laboratory of Prof. Vir-

chow for upwards of two years. These cases represented the two extremes, mania and melancholia, and as they were typical cases of both forms of the disease, we felt desirous of making the investigation thorough and complete. A careful exposure of the brain and spinal cord revealed nothing of importance or of unusual occurrence, nothing not found in a hundred cases dissociated from insanity. Upon removal they were placed in alcohol and set aside; our investigations being continued until all the viscera of the abdominal and thoracic regions had been explored. If there was organic disease of any of these viscera, excluding the changes which age produces and a possible absence of color in some of the tissues, sufficient to exercise an influence upon the nervous system, however slight, in determining either form of insanity, we certainly failed to discover it. These organs looked healthy and were healthy, or at least so pronounced by all who saw them after a careful microscopical examination covering a period of some three days and nights; during which time also, the brain and spinal cord were subjected to the same searching analysis,—all of us full of hope and in the firm belief that our efforts would be rewarded and something revealed, (we knew not what,) that would support the conviction already ours, that there must be physical decay where there was mental disease. Every nerve cell, however, that passed under the field of our observation presented the same healthy look and form, evidencing no departure from the perfectly normal type, no softening, no irregularity, no breaking down of the cell wall, or any change whatever that could be received and accepted as pathological. It is true that there were glass-like beads studding the choroid, and a slight effusion into the ventricles, a congestion of the meninges of the brain and sinuses, and along the course of the larger vessels a lymphy deposit more or less extensive; but this was not peculiar or unlooked for, and certainly constituted no evidence of insanity. You see this very often in death from other causes, as in typhoid and other fevers, or in any immediate and sudden congestion of the brain. It will be seen, therefore, that the revelations in both of these cases did not contribute very largely to support the views I then entertained, but on the contrary suggested a very reasonable doubt as to the invariable presence of tangible pathological changes in every case of mental disease.

Now a more notable instance of this kind, although not associated with insanity, yet showing a marked lesion, or supposed lesion of the nervous centres, either functional or organic, came under

my observation in the person of a man suffering from that frightful condition, "opisthotonus." The case was one that had baffled the treatment of many eminent medical men for a period of over ten months. It was in truth the type of all types of this state, and so marked that the patient would bend backwards and touch the seat of a chair with his head, and indeed almost the floor, and in this position would walk about the room for hours together. If in bed, would smite his head against the wall or head board, his trunk assuming a semi-circular form, hardly touching the bed at all; and these paroxysms were so repeated and violent, that he actually wore a hole in the plastering where the back of the head came in contact with the wall at the head of the bed. A large running sore, of course, appeared upon the occiput, the bone being almost denuded at this point. During all this time the patient did not appear to be suffering from any great amount of physical disease, and save a mild form of chronic bronchitis, and the supposed lesions of the nerve centres, was thought to be entirely free from any organic trouble whatever. In the course of ten or twelve months he died, and we took up the knife with well-assured conviction that we should be able to unbosom the real nature and cause of this man's distemper, sufferings and death. It was a plain case, one that stood out among a thousand, as being purely and wholly an affection of the nervous centres. We came to the case, therefore, not doubting, but believing; determined to make the investigation as thorough and complete as our knowledge would permit; leaving nothing to conjecture but every thing to the microscope. We examined the brain and spinal cord minutely, every portion of it, but with the exception of an unusual fullness or turgescence of the larger vessels of the cord and its meninges, together with the meninges of the brain, and to the best of my recollection, a slight serous effusion at the base of the brain, there was positively no disease whatever.

I should speak with some diffidence, however, and perhaps I ought not to affirm that, for my knowledge of the microscope may have been insufficient to have enabled me to detect it, if there. I will not question such a possibility, but from the evidence derived from this investigation, with the aids at my command, competent assistants in whom I had great trust, and who had been schooled in the use of the microscope and the appearance of every tissue in the body, both in health and disease, I could not but feel my faith shaken in the theory so warmly espoused by Dr. Gray, that there is always manifest structural change in all cases of mental disease.

Indeed, I could come to no other conclusion but that there were causes of insanity, (exceptional though they be,) not having their origin in physical disease proper, but in emotional or moral causes which secondarily, if long continued, unquestionably lead to this result.

Dr. GRAY. Science has first to determine the actual lesions found after death. No matter how slight they are, they are nevertheless lesions, and, if sufficient to produce death, they are all the more important to consider. It is true that in many cases we are surprised at the paucity of autopsic disclosures after the most marked constitutional and local symptoms during life, and also at the opposite condition. Examination may indeed disclose only congestion of the membranes, or a certain degree of dilatation of vessels. Yet why should such changes exist? What is behind this condition, as poison of blood, &c.? In the cases brought forward by Dr. Kilbourne there are certainly distinct lesions. The cysts found on the choroid plexus are evidence of this. This exudative process would imply previous congestion. Patients die suddenly, in the so-called cerebro-spinal meningitis, and ordinary post-mortem observation might only discover congestion. Still, whatever the condition is, it has produced death. Examination of the blood, or examination of the tissues under the microscope might reveal the potent morbid changes. In regard to microscopic examinations, the investigation into the changes in the intimate structure of the cells and the capillaries can not be made at once, and microscopy is not yet perfect.

In view of this, the cases of Dr. Kilbourne can not be taken as thoroughly examined. It requires time for brain and other nerve tissue to harden sufficiently in absolute alcohol, before sections can be made for thorough microscopic examination.

Dr. NICHOLS. This is a question of great practical moment in relation to the treatment of insanity. I have no doubt that the condition of the brain essential to the production of insanity is functional. The functional derangement often appears to be due to defective nutrition. Our most successful therapeutics prove this; and if we generally expect organic disease and address our remedies to its relief, we shall make most serious mistakes. Functional derangement, causing insanity, often follows organic disease. This is the usual order of sequences in insane epileptics; and functional disease, if not arrested by early recovery, usually; but not always runs into organic. Esquirol, you will remember, in his early investigations, supposed that insanity arose from organic

disease of the brain, perceptible to the senses, and that the time would come when an expert pathologist would be able to tell by the characteristic autopsic lesions of the brain, whether the patient suffered from mania, dementia, or melancholia. They did not acquire the ability to do that, and were a good deal amazed. Finally, a young girl under Esquirol's care, suffering from a recent attack of mania, was killed by a fellow patient, and upon an examination of her brain, it presented a perfectly healthy condition in all its parts. This case modified the post-mortem expectations of Esquirol and his coadjutors, and had much to do in leading inquirers to more correct views of the pathology of insanity. I have in my mind the case of an estimable gentleman who was a patient in the Bloomingdale Asylum, and made an address of welcome to Lafayette when he visited that Institution in 1824. He has since had several somewhat protracted attacks of active insanity, and now, at the age of eighty-four he is entirely well and has been for a number of years. This gentleman may have recovered from several attacks of organic disease, but that is not probable; and the case is particularly valuable as showing how long and how often a person may have functional disease of the brain of a pretty high grade, without its running into incurable organic disease. The brain and the galvanic battery may be considered the analogues of each other. We know the condition of the perfect working of the simpler inorganic machine. If the acid is too weak, or the plates a little rusted, or some connection is broken, or an insulation is defective, it will not operate. How occult may be the defect which deranges the working of the vital machine, and what a wonder it is that the galvanic batteries we carry in our skulls operate as correctly as they do in so many cases, and through such long series of years!

The paper of Dr. Gray was then laid upon the table, and on motion of Dr. Shew the Association adjourned to meet a 7 1-2 P. M.

EVENING SESSION.

THURSDAY, May 28.

The Association was called to order at 7 1-2 P. M., by the President.

Dr. COMPTON. Mr. President, I would not be doing justice to my own feelings, if I permitted this day to pass away without

offering a tribute to the memory of one of my predecessors, formerly a member of this Association.

Last year it was my pleasure to note that every one who had ever occupied the position of Superintendent of the Mississippi State Lunatic Asylum was still alive, and actively mindful of the welfare of the Institution. Death, however, has visited the fold, and has stricken one of the noblest from the list. To do full justice to the memory of that great and good man,—great and good in all the qualities of head and heart,—would require a more gifted tongue than I possess.

Alfred B. Cabaniss was born in the city of Huntsville, in the State of Alabama, on the tenth day of December, 1808, and died in Hinds County, Mississippi, on the twenty-first day of November, 1871, not quite sixty-three years old.

Dr. Cabaniss received a diploma from the Transylvania University, at Lexington, Kentucky,—then the great school of the west, in 1833, and in 1835 was admitted, *ad eundem gradum*, at the Jefferson Medical College, in Philadelphia.

As far as Mississippi is concerned, it is not necessary for me to speak of the career of Dr. Cabaniss. He settled in the town of Raymond, in Hinds county, more than thirty years ago, and afterwards removed to the city of Jackson, the capital of the State, where he made a reputation for skill and kindness, not surpassed by any member of the profession in Mississippi. He possessed, in an eminent degree, all those elements which are essential to a successful physician. With a mind philosophical and meditative, in its turn, he combined a warm-hearted geniality, and a sympathetic cheerfulness, that made him ever welcome, not only as a physician and a man of science, but as a friend and adviser. His ear was ever attentive to the wail of the afflicted, and his hand was ever open in charity. A well-compiled history of his life would be but a continuous succession of good deeds.

During the war, though far advanced beyond the military age, he was not an idle spectator, but, at an early day, offered his services to the sick and wounded confederate soldiers, and for a long time was the post-surgeon of the city of Jackson. Many a survivor of the lost cause will long remember the kindness he received at the hands of Dr. Cabaniss!

Soon after the war he was appointed Superintendent of the Mississippi State Lunatic Asylum,—the position which I now try to fill. While he was the “good man of the house” about four years, I know that he attracted to himself, not only the employés of the

Institution, but the patients, who regarded him as their father. No where, perhaps, except in his immediate family circle, did his death cast a sadder gloom than it did upon the household of the Lunatic Asylum.

In his day and generation he made his mark amongst men, and dying, left behind him an example worthy of the imitation of those who are to follow him. A better legacy no man can bequeath !

Dr. KIRKBRIDE. Having known Dr. Cabaniss for a number of years, and observed the great interest he manifested in insanity, and especially in the meetings of this Association, several of which he attended during his connection with the Mississippi Institution, I should have felt it my duty, if Dr. Compton had not said so much in reference to him, to speak of his character. I have known from several of his patients and their friends, his uniform kindness and attention to those under his care under all circumstances, and this made him so much beloved by those under his care, and by all connected with them.

Dr. Nichols offered the following resolution, which was unanimously agreed to.

Resolved, That the thanks of this Association be tendered to Dr. Compton, for his eulogium of our late brother, Dr. Cabaniss, which he has just pronounced, and that the Secretary be directed to spread it upon the minutes of the Association.

Dr. KIRKBRIDE. I had intended at a later period of this meeting to read a short paper on the subject of the crowding of our hospitals for the insane, which has now become so common in nearly every section of the country, but at the urgent request of the Committee on Business, instead of doing that, I will merely make a few remarks on the subject, and in that way endeavor to obtain the views of the members on this important subject. I think that any one who has observed the current of events during the past few years must have observed how common this great evil has become, in most of our hospitals for the insane; thus having within their walls a much larger number of patients than it is possible to treat properly.

We all know of more than one institution, perhaps several, in which there are now not less than two hundred patients more than there ought to be. It is unnecessary to say to any practical man that such a state of things is demoralizing in its effects; that many abuses arise from it that would not be allowed in houses not crowded, and that it leads to dangerous and serious evils of many

kinds. It seems to me, that the officers of hospitals are to blame for all this to some extent, by receiving patients after the house is full. Can it be possible to put five hundred patients in a house intended for three hundred, without serious inconvenience and injury to all? In my opinion every board of managers ought to pass a resolution forbidding the introduction of patients into a house after it is full, unless under extraordinary circumstances. Although at first it may bear hard on some, it will be beneficial in the end to the whole community. I have no doubt but that if we refused to receive patients after our hospitals are full, the community would soon become interested in the subject, and would compel legislative bodies to make adequate provision for all the insane in the country. It will be merely a more extended statement of these views which I should make in the paper to which I have referred.

The PRESIDENT. Will you present these views in the form of a resolution?

Dr. KIRKBRIDE. I have not prepared anything of the kind, but I will do so at a subsequent meeting, if thought desirable.

Dr. WORKMAN. Is it the intention of Dr. Kirkbride to read a paper on this subject?

Dr. KIRKBRIDE. It is not now. It would at any rate be a very short paper. Perhaps the views of members could be given just as well on the remarks made this evening as on the paper itself.

Dr. WORKMAN. I should regard the reading of a paper by Dr. Kirkbride as most important.

The PRESIDENT. The chair proposes the discussion of this subject by this Association at once, and to commence it by calling on Dr. Nichols.

Dr. KIRKBRIDE. The important point is whether the authorities of hospitals for the insane should not prevent overcrowding by refusing patients when full. I think we all agree in reference to the unfortunate effects of overcrowding.

Dr. NICHOLS. It seems hardly worth while for me to say more than to express my entire concurrence in the views of Dr. Kirkbride, both in respect to the great evils resulting from overcrowding our institutions and to the remedy he proposes. The overcrowded state of some of our hospitals is probably doing them and our speciality an injury that has not been particularly referred to. The overcrowding gives rise to popular distrust in respect to the good management and usefulness of our institutions, and impairs the popular sense of reliance upon their competence to care for the insane with humanity and skill.

Dr. WALKER. In common with most others, I suppose I have had some little practical experience of the evil effects of over-crowding a hospital. Four years ago, or more, we reached the limit of all decent accommodation for the insane, at the institution in Boston. Still the thing went on from year to year, constantly adding to our numbers, and constantly adding to the inefficiency of our hospital. I have seen week after week the truthfulness of Dr. Kirkbride's remark, that it was demoralizing to the patients and physicians themselves, for the reason that we can not require full duty from the attendants, overworked and laboring under the disadvantages they must have with more patients than the wards are calculated for. And we soon get to feel that the evil is not quite so big as we had thought it to be.

This thing was repeatedly brought to the notice of the board of directors, and by them to the city government. A year ago the city council did all it was possible for them to do. They passed an ordinance requesting committing magistrates to send no more patients to the Boston Lunatic Hospital until they were relieved. We have had no relief yet, although we have received some half dozen patients, a class of patients that could not be turned away, feeling we could do more for them than could be done if they had to be carried a hundred miles further.

I can not see any practical way of relieving this thing except by remonstrance. In our State, and I presume it is the case in most of the others, the admission of patients into public hospitals is done by magistrates or officers of the law. There is no way of reaching them so as to control this matter, except by remonstrance. In our own case the action of the city councils is not binding upon the magistrates, and we relied upon their wisdom and good sense to relieve this state of things, by ourselves going half way. I presume it is so in other States, and, having that power, they can exercise it in spite of the trustees and superintendents of hospitals. I have no doubt that a vigorous work on the part of the trustees would have the effect of diminishing the number of commitments, if not of causing them to cease altogether. I believe that a step of that sort taken by the trustees of the different hospitals would, sooner than any other means possible, arouse the proper officers up to a point of duty devolving upon them to furnish sufficient accommodations for all that require it. An expression of opinion on the part of this Association, I have no doubt, would go far toward awakening a proper feeling on this subject.

Dr. SHEW. As you are well aware we have had experience in this direction in Connecticut recently. The Hospital at Middletown was begun six years ago. The different sections were finished as soon as possible, but as fast as finished the insane of the almshouses were sent to us. The object was to relieve the poor at the earliest possible moment. Three years ago, or about one year after the hospital was opened, the wards were overcrowded. I frequently called the attention of the trustees to the great importance of not over crowding the wards; and the utter uselessness of attempting to treat acute cases where there were so many chronic cases. They passed a resolution to refuse to accept any case, except where the authorities applying withdrew a chronic case. I think that resolution had much to do in bringing about a reform in the matter, and that it has resulted in repeated appropriations from year to year. I have no doubt that the statement of Dr. Kirkbride is true. Our experience has certainly verified it. At that time we refused admission to all, although there were many cases presented, unless a chronic case was removed. The next year they went to the Legislature, and an appropriation was made almost unanimously, with opposition only on the part of some politicians. Last year another wing was begun, which is nearly completed. This year there is still another one. Last year we were overcrowded, and our trustees put their hands in their pockets and provided the sum of \$17,500. With this fund they purchased land on which were two houses, and changed them into cottages, to make needed provision for chronic cases. This year the Legislature awarded them credit, and promptly responded by making an appropriation for another wing.

I think, with Dr. Kirkbride, that in all the States, particularly the older and wealthier, they have no just excuse for delaying this good work, and that they would certainly respond much sooner by enlarging their hospitals, or building new ones amply sufficient for all present demands, if some more decisive action was had by trustees and superintendents.

Dr. WORKMAN. I am very much pleased that this subject has been brought to the attention of the Association by our old friend, Dr. Kirkbride, because of the great weight thus given to this discussion.

Like all the rest of you, I have experienced the difficulty connected with over crowding, and, at a very early period, I remonstrated very strongly against it. So far back as 1856, I began to experience this difficulty. The governing body of the Institution

passed a resolution, which was, at my instance, reduced to the form of a by-law, authorizing the medical superintendent to determine at any time what number could be properly lodged in the institution, and that this number should not be exceeded. Of course, that was putting the whole thing in my own hands. We have arrived at that number already, if not exceeded it. Then came the difficulty of delaying the admission of cases where it was of the utmost importance that they should be subjected to early treatment. I felt that my attention was least called to chronic cases, and I gave preference to the acute. I carried that out for years. I had a circular of queries printed, which I sent to each applicant, to enable me to judge of the real character and comparative merit of cases. From this, and other sources of information, my decision was based as to merit for admission, or the contrary. The Institution worked well in this way. But some years ago, when we had a board of inspectors, five I think, which preceded our present single inspector, it was deemed necessary to increase the number of inmates. A presiding wiseacre could see no harm in overcrowding, and he even took up my own report, and demonstrated from my own figures, that in years when we had the largest numbers we had the best health. Therefore it followed that overcrowding led to the best health.

I think it was in the year 1861, that we transferred a large number of patients to the branch Asylum at Walden,—some 200. He took the figures at the close of the year when I had just recently sent away this number of patients, and used them as representing the whole year. He showed that the mortality had been greater than in years when we had larger numbers, without asking any information from me on the subject. There were two medical men; (and I think they make worse trustees than those who profess to have had no experience;) well, they were two very important medical men, and it would have been a sinking of their dignity to compromise themselves by asking my opinion on the subject. They reported, and added fifty beds: their decision overruled mine, and it was carried. (However, the government of the institution for Ontario is now under one man of good sense and business activity, a man of great urbanity and kindness of spirit, and we have no difficulty.)

I have followed up the same course. If twenty applications are put in and there is only one bed, it will be awarded to the most urgent case; the other nineteen must lie over. I look upon the evil of overcrowding institutions as the greatest of all to which the

insane are subjected. It has been said by keeping out an acute case we may do a great injury, because we make it liable to become a chronic and incurable one. I think some provision should be made for the chronic insane, by enlarging our buildings or in some other way. I do not know that it is very likely you may succeed as adroitly as I did. I do not tell other people to see what I am aiming at before I have gained my point, and I endeavor to administer new regulations with all circumspection. I make these observations in order that you may have something to refer to in support of your views, and that as the United States in a few years, perhaps, may become annexed to the province of Ontario, you may follow suit. [Laughter.] We have a class of persons from our jails as dangerous lunatics, but we find these patients generally less dangerous than those admitted in the ordinary way. But they are not admitted until we are prepared for them. The good surgeon is furnished with a paper, certain questions are propounded, and his answers are sent through the Sheriff. The cases are then sent to the Inspector and if he recommends them to be admitted, he turns it over to the Secretary and the Lieutenant Governor's warrant is issued. If that patient was sent before I had advised a vacancy for him, I would reject him just as I would do any other applicant, and it is understood that we should do so.

Dr. HUGHES. I have experienced in our Institution the ill effects of overcrowding in various ways. Three years ago we had 367 patients, (the utmost capacity of our Institution when erected was 350,) and even with that little excess in the number of patients over the actual provision, I have experienced a great deal of difficulty in so disposing of these patients as to feel perfectly safe in the entire building at night. I suppose it is the common experience that the vast majority of all the homicides that take place in asylums outside of the corridors, take place in the dormitories where we have to crowd our patients, and I have come to dislike the dormitory system. I think there is where overcrowding is usually done. If we have our rooms so constructed as I think I found most of the rooms of the asylum of my friend, Dr. Landor, that we could not put more than one patient in a room, then I think we would obviate the difficulty. I think it proper to recommend a system of constructing asylums by which they can not be overcrowded.

I suppose in nearly every State the law is somewhat similar to our own. The superintendent has the option when the Institution becomes crowded of rejecting the chronic cases. In our case, the

law provides what those chronic cases are, cases of one year's standing and over. When you have rejected those chronic cases and your asylum is full, you then have appeals upon your sympathy which are irresistible. It is an exceedingly difficult thing, indeed, for an asylum superintendent when a recent case presents itself for admission, and where there is a promise of cure not to receive it. I am glad that the subject has been brought up, and I think it really as important as any subject we can discuss. In our own State, and I presume it is about the rule, I suppose we have about two thousand insane, chronic and acute, and yet we have state provision for but three hundred patients. Every day they are knocking at the door for admission, and what is the superintendent or board of managers to do? They can not reject them so long as there are places to put them, with a prospect of cure. I think the only proper remedy is to so construct that the superintendent or board of trustees may not be overcome by their own sympathies, and I believe that can be done by abolishing the dormitory system.

Dr. WORKMAN. Would the gentleman abolish corridors?

Dr. HUGHES. I would not abolish corridors, because by so doing you would have to increase the number of attendants.

Dr. WORKMAN. I made the inquiry because I found they had beds in corridors where they were crammed.

Dr. RIEDEL. When I entered upon my duties in New York, I noticed that a certain number of emigrants arrived in that port very imbecile, that there were numbers of idiots and chronic insane,—at any rate a great many incapable of providing for themselves. I estimated that thirty or forty came within a year. They were either sent to the New York hospitals, or to hospitals elsewhere. The cause of the arrival of so many is from the fact that in most countries of Europe, the communities are bound to support all their members, and nearly every community has some member not properly insane, but of a wicked mind or vicious temper. They are good for nothing, rather a burden to the community. People of these communities tell them, "The best thing you can do is to go to America." They give them twenty or thirty dollars sometimes, and ship them with the impression that the struggles and trials of America will improve them, [laughter,] but they are never cured.

In the first place, some of these who come are *bona fide* insane, others emigrate with the beginning of insanity and then we have the class I have alluded to, or those who had been insane or inmates of asylums for years.

My policy has been to be sure that there was some party in the old country bound to support them, and then to send back such people. I have reason to believe that the number of such arrivals has diminished.

I have given these facts in order to explain in some degree the increase of the population of New York.

Dr. LEWIS. I do not wish to take up the time of this Association discussing this question, but prefer to hear from some of the other and older members. I wish, however, to personally thank Dr. Kirkbride for the circulation of this question. It is one troubling us in the State of Ohio at this time, and if we can get this Association to urge upon the authorities the importance of proper provision for the insane, I trust that action will be taken.

Dr. BROWER. I am glad to say that we are more fortunate in this respect, than the Institution I have visited during the past few days. In Virginia, the directors have full authority in this matter. Having fixed the capacity of our Institution at a certain number, they wisely determined not to receive more than that number. We have continued this policy, receiving new patients only as vacancies occur, and the result has been very satisfactory. The capacity of our asylum has been increased twenty-five beds in the last twelve months, and the people of the State are fully alive to the necessity of more accommodation.

Dr. CARRIEL. I think we all agree with Dr. Kirkbride, that it is undesirable to overcrowd our Institutions for the Insane. I think most of us can agree with him that State Institutions are being overcrowded. To remedy this state of things in some of the States, I suppose it will be necessary to have the laws modified with regard to the admission of patients. I know of at least one State where the board of trustees has no control over the admission of patients. I think they have authority to discharge a certain class of patients,—the paying patients. Well, in these Institutions, it is pretty well known that they get little enough any how from the State, and have to eke out an economical existence from the pay they receive from the private patients. Take a State where the indigent class has preference by law, and that in order to keep the numbers down you have to discharge all the paying patients; we do not like to do that, we would rather sleep a few in the halls and fill up our sitting rooms. That this is an evil and leads to irregularities, and results in a loss of everything that constitutes good management, there can no question. In the State of Illinois, the officers have entire control over the admission of

patients into the State Institutions. I suppose at the least calculation, there are twenty-five hundred insane in the State, and until very recently there was but one Institution. Still, the officers of this Institution, I think, have always had entire control over the admission and discharge of patients. No patients can be admitted into the Illinois Hospital for the Insane except by a permit from the superintendent; there is one exception: they can send a convict, but in no other case.

What we intend to do is to admit all cases where there is any reasonable hope of affecting a cure. We do not decline to receive any who have not been deranged more than a year. When we get so full that we can not do that, the trustees issue a discharge list, and send the cases that have been under treatment the longest, or that there is the least hope of benefiting, back to their friends, or the county authorities.

This matter of arranging institutions so that you can not put more than one patient in a room, and can not have any space outside of the room, would be a pretty good thing to prevent overcrowding, but as Dr. Workman remarked, would fill up all the corridors. I have seen twenty-five patients in one corridor with beds on the floor, since I have been at Jacksonville; that was when we had one hundred more patients than we had accommodations for.

I think this subject is an important one, and that these institutions should not be allowed to be overcrowded, when the best interests of the insane are considered, or when the best results of treatment are expected.

Dr. PECK. I have nothing special to add to what has already been said, except by way of explanation in reference to our own State. Unfortunately, in the State of Ohio at the present time, we are obliged to construct our institutions under the provisions of a special law which contains such restrictions as unavoidably retard the progress of the work. Otherwise we would soon have perfect relief from the existing pressure, and abundant accommodations for *all* our insane. Owing to existing circumstances the work on our new structures is going to be protracted, and for the time being the existing institutions will suffer from an overcrowded condition.

Dr. CALLENDER. I can but give a similar experience to that related by others. I suppose that all of us feel, in a greater or less degree, the importance of the propositions submitted by Dr. Kirkbride, and concur that the overcrowding of insane hospitals is a

grievous evil. I speak from an experience in the matter, not so serious as that detailed by some. By action of the Legislature a year or two since, we have been partially relieved in our institutions. Tennessee, however, with a population of a million and a quarter has but one hospital, and can accommodate scarcely a third of her insane. By recent legislation, also, we are enabled to limit the number sent to us, and we have more control of the matter of overcrowding, and in this respect we are different from the condition just described by the gentleman from Ohio. I think this step was wise and salutary. Notwithstanding, however, the extensions we have made during the past year for the accommodation of nearly one hundred more patients, the number of applications filed in my office calls loudly for still greater accommodations in separate hospitals. I am pleased that Dr. Kirkbride has introduced this subject, and trust before the session closes that this paper will be embodied in the form of an earnest declaration of views on the part of the Association. In this form it can be used by members, and presented as the unanimous opinion of this body in their annual reports.

Dr. WORTHINGTON. I have not had much experience in overcrowding, simply because the board of managers of the Institution which I represent have it in their power to limit the number. About a year ago when we were about commencing operations in building, the number in our Institution suddenly arose to a larger number than we were able at once to accommodate comfortably. At my earnest solicitation the authorities passed a resolution directing that no more be received until further orders; whereupon I closed the doors and kept them closed without unfavorable results.

In reference to what the Doctor has said relative to Ohio, it seems to me a radical defect in our institutions that the board of trustees is not able to say how many patients shall be received; that entirely irresponsible persons are permitted to send patients to institutions to endanger patients already there.

Dr. DUDLEY. I think that officers of hospitals, when they have the authority to limit the number of patients, should refuse applicants for admission whenever the hospitals have as large a number as can be properly accommodated. At Lexington the asylum is overcrowded. Having no fixed limit we are at the mercy of the courts.

The answer that we are overcrowded is, however, generally deemed satisfactory. The last session of our Legislature failed to

provide for the erection of a new asylum, or to increase the accommodations at either of the present asylums, but passed an act to pay the same amount for the support of the indigent insane, who can not be received in either of the asylums, as is now paid for the support of those in the asylums. This act will give us some relief from the pressure for admission, but nothing short of ample accommodations for all the insane in the State will relieve us from the evils of overcrowding.

Dr. HESTER. The remarks made by Drs. Carriel and Brower, apply to the Indiana Hospital for the Insane. The Superintendent and Board of Commissioners have full power and control over the admission and discharge of patients. The capacity of our Hospital is five hundred, which is the limit.

Experience has taught us the evils of overcrowding the insane, and we therefore no longer permit our wards to remain in a crowded state very long at a time. We make room for recent and curable cases by removal or discharge of the chronic and supposed incurable ones. I have no suggestions to make. Dr. Woodburn, a former superintendent, and now a member of our Board of Commissioners is present, to whom I defer, and shall be pleased to hear from him upon the subject under consideration.

Dr. WOODBURN. I belong to that troublesome class of citizens referred to by Dr. Workman. I am unfortunate in being a physician as well as a trustee, but I try to not trouble the superintendent. I try to uphold his hands, and not only to make him comfortable, but to increase the efficiency of his house. We in Indiana have but one insane hospital, and I say it with shame. With a population of seventeen hundred thousand, and with a wealth of probably \$700,000,000, yet only one State insane hospital. I want to say, sir, that the people are not to blame for it. They are awake to the necessity of more room for the insane. They know the need of it, but the delay is on account of our State having been tied politically for many years. First one party having the majority, and then the other, and if the party in the minority sees that the majority are going to take an unfair advantage of them, they will break up and go home and leave all our institutions without provisions. Recently we have not been left entirely at the mercy of resignations in that way, from the fact that the Legislature a few years ago passed an act declaring that in case the State Legislature failed to appropriate for the support of our liberal institutions, the Governor, Secretary of State, and Treasurer of the State, should make the appropriation, but in no case should they exceed the ap-

propriation for the year preceding. Had it not been for that law, for the last two years we would have been left without any appropriation at all.

The Governor in his last message recommended the building of two more insane hospitals in the State; the committee on benevolent institutions made a report recommending a law to that effect, which was drafted, and they had enough members of the Legislature to pass one bill if not both, to go to work at once. But they unfortunately broke up before the act was passed and nothing was done. We must have in the State twelve hundred insane people who ought to be in insane hospitals, and probably five hundred more who can be provided for at home. We have capacity for five hundred, and we can not damage that five hundred for the sake of relieving the counties. Our rule has been, for years, whenever we are full, to refuse, unless it is a recent case. Our superintendent accepts those at once, but he discharges chronic cases to make room, and our people see the difficulty, for the patient goes home to his friends.

I feel obliged for Dr. Kirkbride's opinions in regard to over-crowding institutions, and I hope this Association will pass an urgent resolution, asking that institutions may not be over-crowded.

Dr. STEVENS. I do not think it necessary to debate the question proposed by Dr. Kirkbride. It is well, however, that the facts in relation to the matter should be generally known, and an expression of the sentiment of this Association will have a good effect. I am familiar with the working of two different institutions, being a member of the board of managers of our State Asylum and superintendent of the one in St. Louis county. I know that both are experiencing the full and bad effects of over-crowding. The State Institution will, however, within the coming year, be relieved by the construction of the North Western Asylum at St. Joseph.

The St. Louis county asylum was opened about three years ago with one hundred and twenty-eight patients; by the end of the first year we had two hundred and sixteen, I then foresaw that as our building was constructed for only two hundred and fifty, we would soon reach what was considered the full capacity of the establishment and called the attention of the county court to the subject, hoping that measures would be taken to extend accommodations; the third year has ended and we now have two hundred and ninety-seven inmates. In consequence of this state of things, we have been compelled to refuse admission to paying patients,

and even a large proportion of others who are justly entitled to the benefits of the Institution. Our people feel exasperated in view of this state of facts, and well they may, for nearly a million dollars has been expended and we only have accomodations for about one-half of the insane belonging to St. Louis county.

Dr. SHURTLEFF. Mr. President: I was not in the room in time to hear the remarks of Dr. Kirkbride; but I infer their purport from the discussion thereon by others since I came in. I presume there is no superintendent present who has had more experience in an overcrowded hospital than I have. The law in California is such that neither the directors nor the superintendent have any control over the admission of patients. The authority is vested solely in the judges of the Courts of Record. The law is very full and specific in its requirements, and well calculated to protect the rights of the person sought to be confined. When the judge, after the required examination, finds the alleged lunatic to be insane and formally commits him to the State Asylum, the superintendent is compelled to receive him. He has no more right to reject a patient, thus sent to his care, than the warden of a penitentiary has to refuse to admit a convict duly committed by process of law. The consequence is, that our Institution has annually been growing more and more crowded, until at length we have between two hundred and three hundred patients sleeping on the floors of the corridors. For several years previous to the last I have been presenting this matter to the Legislature in the somewhat formal style of our annual reports, until, perhaps, my complaints appeared stereotyped. At any rate I am of the opinion that action was delayed by our legislators more from a lack of a full appreciation of the wants of the insane than on account of any objection to do what was necessary to be done for their relief. In my last report I made a stronger appeal and tried to describe more graphically our condition. I did more than that. When the hospital committee of the Legislature made their official visit to the Asylum, composed as it was of twelve of its members, I took them all through every ward of the male department at ten o'clock at night, and had them pick their way over and between the sleeping and waking bodies that were lying upon the floors of the corridors. The sight produced a conviction and awakened an interest which no verbal representation could have done. The result was, that when the question of provision for the care of the insane came before the Legislature, including not only cost of maintenance but provision for a new asylum and a new wing to

the female department of the old one, the bill was passed without a single dissenting voice and without complaint or murmur. And although as just deplored as to his State by our friend from Indiana, our Legislature was tied politically, there being a majority of one party in the Senate and a majority of the other in the Assembly, on this question humanity rose above party, to the honor of both parties be it said. Indeed public charities can not flourish with polities, and that is a poor one which has to be subjected to the malevolence and vicissitudes of party strife and made the spoil of political victory.

In regard to the best method of overcoming the evil of over-crowding our institutions, it seems to me that the only way by which it can be fully accomplished is through the influence of superintendents and others specially interested in this cause, by their bringing the condition of things more conspicuously to notice, and urging upon the legislatures and the people of their respective States the duty of each State to make and keep up adequate provision for the proper care of all its insane. This is the course I have pursued and shall continue to pursue.

Dr. BARTLETT. I do not like to detain the Association to repeat the same old story, but it is now fourteen years that I have been in hospitals, and every year in an overcrowded institution, both in Massachusetts and in Minnesota. When I left Massachusetts three and a half years ago they had an excellent institution, which I may speak of, as the one who presides over it (Dr. Earle) is not here, and it was built under the direction of our late brother, Dr. L. V. Bell. It was planned for two hundred and fifty patients; when I left it had four hundred and seventy, besides employés and officers.

When I came to Minnesota I found one hundred and eight patients in temporary buildings. One wing of a permanent building was erected; that is, the walls were up and ready for plastering. The first winter we had an appropriation of sixty thousand dollars and finished that wing, making provision for about one hundred patients. As soon as it was completed I moved into it and took in one hundred patients. That relieved our condition for awhile. Before another appropriation could be made, we had over two hundred patients in both institutions. The law was so arranged that if the parties had means, the judges had no power to commit and the trustees had no legal authority to discharge any patient; the superintendent could discharge when the patient *had recovered*.

(The law was amended last winter, 1872, so that judges can commit any person found insane, and the trustees can discharge patients on recommendation of the superintendent.) Last year another appropriation was made, and we erected another wing of the permanent hospital, which is now in process of completion; and I hope within six months to be able to admit one hundred more, provided we continue the temporary buildings, which are considerable of a nuisance, but better than nothing. Our State being very young and, I may say, comparatively poor, I think she has made appropriations as fast as the condition of the treasury would admit. Our constitution limits the debt of the State to two hundred and fifty thousand dollars, and that was up two years ago. We have now a sum to be submitted to the vote of the people, which I hope will be ratified by them. That is about the only hope we have.

Dr. STEUART. I have no reason to complain. The law of the State of Maryland provides that we shall take a certain number, one hundred and twenty. These we can conveniently accommodate. I have no doubt, however, from the statements made, some legislation is necessary to prevent this great evil of crowding insane asylums.

Dr. FULLER. I wish only to express the hope that this Association will take some formal action in the matter. We, for three years, have determined to take no more than we could accommodate, and the pressure is now getting very strong. I want a copy of the resolution to take along, if we pass one in the shape that has been suggested. I would be very glad to have some action taken.

Dr. WEBB. My report is much the same as that of the gentlemen preceding me—crowded—except it be in a much greater degree. We have accommodations for three hundred and fifty patients in which we now have about six hundred. This condition of affairs defeats, in a great measure, the objects for which the asylum was constructed. Our ventilation and heat, sleeping apartments, dining rooms, dumb waiters, all fall short, in fact one of the most arduous duties imposed on us is to so arrange the patients that they commit no violence on each other.

Dr. SAWYER. Our hospital has been more or less crowded. It has generally had from one hundred and thirty to one hundred and fifty. It has been kept at that by selecting very carefully from the number applying for admission, as for instance, recent cases and those requiring immediate treatment.

Dr. RICHARDSON. I am very much obliged to the doctor for the old story. It is getting quite venerable so far as our department is concerned. Our population is 894, and rapidly increasing, with no hope of increased accommodation. Recently the wings have been extended, affording room for 168 patients, leaving us still greatly crowded. City councils think they have done so much in appropriating for said extension, that we hardly dare ask them for more at present. I trust that we will get relief, for now I never know when we go to bed that we will not find half a dozen broken heads in the morning. In the rooms which were intended for one we have, in a number of instances, three, and in a still greater number two. Our corridors are frequently occupied by beds on the floor. I am glad that this question has come up, and I hope that the Managers of the Insane Department of the Philadelphia Hospital will have the boldness to say that they will receive no more patients until further provision has been made for their protection. Councils have no right to ask us to admit more cases than we can provide for with safety. We have extra beds for the floor in all the wards. The number sleeping in the corridors varies with the admissions and discharges.

Dr. WALKER. How many single rooms have you, doctor?

Dr. RICHARDSON. Two hundred and fifty-eight.

The PRESIDENT. How many have you in the corridors?

Dr. RICHARDSON. That varies, as I said before, with the number of admissions and discharges.

Dr. KILBOURNE. This question is a practical one, though it hardly affects us at present, one wing only of our Institution being completed and opened for the reception of patients. During a period, however, a little less than two months, we have received some ninety patients, the applications for admission being twice as numerous. The architectural capacity of the wing we are now occupying is but one hundred and fifty, though by a judicious distribution this number may be increased, perhaps, with comparative safety, to one hundred and seventy-five, but this is the limit.

Now we have in the State of Illinois, according to the statistics of our Board of Public Charities, which I deem to be measurably accurate, some 2,500 insane persons, fifty per cent. of whom, at least, needed hospital or asylum provision, but until the erection of the hospital at Elgin, the one at Jacksonville, over which my able friend, Dr. Carriel, presides, was the only one in the State, and that with a capacity, a healthy capacity, of less than four hundred, though sheltering, I believe, some fifty more.

It will be seen, therefore, that the danger of overcrowding awaits us, and although we have another asylum nearing completion in the southern portion of the State, the danger, at best, will be only temporarily postponed.

I trust, however, the time will not be long before Illinois will make something like adequate provision for her insane, and lessen the question of any abridgement in the usefulness of what she has done, less pertinent than at present.

This whole question of overcrowding asylums is one of peculiar interest to us all, and I hope the Association will take such action in the matter as will be of service to members, trustees, and all connected with the management of hospitals, in securing the needed reforms.

Dr. BANCROFT. Without great experience in the matter of overcrowding, I fully agree with the views expressed, and shall heartily vote for the passage of the resolution. It occurs to me to say, that in every hospital for the insane there should always be a little surplus of room above the average to be accommodated. I have sometimes found a crowded state of a part of the house while there were less patients present than the whole buildings would accommodate, if they could be so classified as to fill every part.

Considerable variation will often occur in the comparative numbers of the sexes, and again there is liable to occur an excess of a certain class of patients who can not be associated with any other class. In such contingencies a small surplus of room is a great relief, as well to patients as to officers.

The question of full and ample accommodations seems to involve the question whether communities are willing to pay for the proper care of the insane. The general testimony from all parts of the country is that hospitals are overcrowded. It is true, also, that a considerable fraction of the insane are still provided for outside of hospitals, as reported here to-night. In some sections, too, cheap accommodations have been provided even when there has been room in regular hospitals. In my own State not more than one-third of the insane are living in the hospital. I think all this would change if the expense for the proper care of the insane was reduced one-half. Overcrowded buildings would be relieved by new structures, and no more poor substitutes for hospitals would be erected. But while suitable care can not be provided at reduced expense, I know of no complete remedy except a willingness on the part of communities to be taxed to the extent of cost of proper accommodations.

Dr. COMPTON. Mr. President: The question so fairly and so fully raised by Dr. Kirkbride presents itself to my mind in two very important aspects.

First, it is manifestly improper to overcrowd hospitals for the insane for the very conclusive reason that it may materially interfere with successful treatment. We all understand that disadvantage too well to make it necessary to discuss it here.

The second point is this: Have we, the people of the United States and of the several States, made ample provision for the care and accommodation of all our insane? While I take no pleasure in giving publicity to the shortcomings of my own poor but proud State, but would rather seek to cover them up, had I no purpose in presenting them, candor compels me to say that Mississippi has not come fully up to the *mark* of requirement; although, as I shall show before I take my seat, she stands head and shoulders above each and all of her sister States of the South in her effort since the war to provide for the unfortunate insane. I would be gratified to get from this Association some expression, something that would assist me in inducing our people, who do not know as much about it as you gentlemen do, to fill the noble measure full.

Our asylum is not overcrowded to the extent that has been complained of by some of the superintendents. Under our law the superintendent, with the help of the trustees, is "monarch of all he surveys." Ours is not a paying Institution. It is free to all our citizens; but the law requires that the superintendent shall receive applicants in the order in which they apply. While this may be fair as to the rights of individuals, it gives to the presiding officer no choice between the chronic cases and the recent and more probably curable ones. He has this discretion, however: when the house becomes full he can refuse further admissions and the trustees stand by him. But we have a large number in the State unprovided for.

To venture into statistics without the figures before me: In England there are two and a half insane persons to every one thousand, or five to every two thousand of the population. In the United States, with a population of a little less than forty millions, according to advance sheets of the census, there are in the neighborhood of thirty-eight thousand insane persons. In the State of Massachusetts, the home of *our* statistician, Dr. Jarvis, (who I regret is not present with us this year,) according to the report of the Board of Public Charities, the proportion of the insane to the sane is about one to every five hundred. I used to

think that they were nearly all crazy up there, eight or ten years ago. [Laughter.]

In the United States at large, we may very safely put it down that we have one insane person to every one thousand of the population. In making the distribution between the States, giving to the older States more and newer States fewer than the average, we may put Mississippi down as a medium, and give to her population of eight hundred and twenty-seven thousand, at least eight hundred insane persons. We will soon be provided to take care of three hundred. Two years ago a movement was set on foot in which I took an earnest part, by which the capacity of our Institution will be duplicated. In less than two years Mississippi has paid out two hundred thousand dollars for the enlargement of the accommodations for her insane. She will soon have completed two commodious wings, which will afford room for one hundred and fifty additional patients. Thus you see I can say for my State, that however cramped and crippled she may be by the disasters of the late war, she exhibits a tenderness and holy beneficence for her children of misfortune equaled by none at the South, surpassed by none at the North. But with us at the South the question of full and complete provision for the insane, presents a complication which you of the North do not encounter in the same form. We have two classes, white and colored. In some States, as in Mississippi, the colored have a majority of the population. Now the claims of both press alike upon us. We must provide with equal care for both. Can we treat both classes with the best chances for success in the same institution? We know too well that a feeling of caste exists between the two races, and that all these feelings and inborn ideas are intensified in the insane mind. Whether right or wrong, it is no less a fact; and as men of science and alienists we can not and must not ignore it in our calculations for the proper care and treatment of the insane; and my friend and neighbor from Tennessee, Dr. Callender, whose remarks I listened to with so much interest a few moments ago, will join me in saying that there is a pressing necessity at the South for providing separate institutions for the two races. Each will be much better off in every respect, if treated and managed separately. And I would be pleased if this Association, composed as it is of gentlemen from every section of the government, north and south, east and west, will give some tangible expression to its views, so that, we of the South may go back to our homes bolstered up and sustained by a body so respectable as this. And for that reason I

suggested a motion a few minutes ago, that Dr. Kirkbride be requested to draw up a series of resolutions, such as all the people of the United States may read and understand. The people of Mississippi, white and colored, will have profound respect for the opinion of this Association on any subject connected with insanity.

Dr. VAN DEUSEN. At the Michigan Asylum the admissions and discharges of all patients, (the criminal insane excepted,) is committed to the trustees, and they have power to order the removal of chronic insane. This is done, however, only when the patient can be made as comfortable elsewhere, and in no case is the welfare of one individual sacrificed or jeopardized to create a vacancy for another. The removal of the chronic insane by direction of the officers of an institution, for other than professional reasons, apparently sanctions county receptacles, and may thus cause delay in securing proper hospital provision. Patients at private expense, unless too ill to bear the fatigues of a journey to an eastern institution, are received only when rooms are not required for those in indigent circumstances.

Dr. CURWEN. Any body who knows any thing about our hospitals in Pennsylvania, knows that the two State hospitals are pretty well crowded now.

Although things do not always go as I would like to see them, I may say that up to this time we have succeeded to our expectations in regard to appropriations for these subjects. My idea is that if members of this Association would go earnestly to work they would more easily obtain the provision necessary. Every one can tell best how to operate in his own community. I know that by a certain mode of operation in Pennsylvania I can readily bring a sentiment to bear for an increased accommodation for the insane. It has been done, and as the old saying is "what has been done can be done again;" and so long as I have health, strength and ability I intend to press this matter to the full extent that is required. What is to be done is not for me to make known; but let gentlemen go to work and in that way which will bring the greatest amount of influence to bear; and every man knows what power wins with a member of the legislature. I do not mean the power of money. I mean something back of that. The way to influence a member is not on his pocket but on the prospects of his election. Men are governed by different considerations, and each man must be influenced by that class of motives which most strongly appeal to his consciousness, and my principle of action is to bring to bear upon any particular man or class of men whatever

will most strongly and effectively lead him or them to do all they can to secure better and more extended provision for all the insane.

Dr. ENSOR. I am very glad indeed, and certainly feel obliged to Dr. Kirkbride, that this question has been brought before the Association for two reasons: First, because it is the one question and the one circumstance that has given me more trouble in the administration of the affairs of the State Lunatic Asylum of South Carolina than all other matters connected with the Institution; and, secondly, because I hope that out of this discussion I and others may be helped out of the dilemma we are in, relative to this matter.

As to the propriety or impropriety of overcrowding hospitals of any class, it is unnecessary to discuss this question here, because we, as medical men, are all agreed on that point. The only question then is the remedying of the evil. Dr. Curwen just now took "the wind out of my sails." He said exactly what I was going to say. His position, I think, is the correct one.

I have suffered all the evils of an overcrowded hospital; I have tried hard to relieve myself of that burden and I think with some success. I first appealed to the Board of Regents of that Institution to authorize me to refuse to receive any more patients, and to pass a resolution at their regular meeting ordering me so to do. They being politicians, depending on public favor, were unwilling to take that responsibility. I determined to take that responsibility myself; and think that it is the duty of every superintendent. I think that the superintendent of an institution, when he is a medical man, is the proper person to judge as to the extent to which the insane of his Institution shall be crowded. I do not think that, in any court of justice, the judge has the right, or would presume to decide whether the hospital is overcrowded or not. He is not the one to decide upon questions of hygiene, else, why call in physicians upon such subjects? I declined to receive patients into the Institution, and took the responsibility myself. The proper capacity of our hospital is about two hundred, and I had three hundred and ten patients in the Institution. I notified the proper officers not to send any more insane to the Institution because I could not receive them; and not to send thereafter until they had ascertained whether there were accommodations. After you do that, and they send, I think it is your duty to send them back until there is room. Where patients were sent to the Institution and there was no room, I said to the judges, "You have done

your duty; I must do mine, I can not receive these patients." I would like to know where the alternative of the judge was, when he sent persons and I could not receive them, because the Institution was overcrowded. Humanity, and I think humanity alone, would sustain me in that course. The result has been that I do not take any more patients into the Institution until I write to the judge in each county stating that there is vacancy for a patient.

I went into the Legislature last winter, and got a law passed requiring county commissioners to take charge of all imbeciles and such chronic cases as the Superintendent of the Institution thought proper to send home to them. When that was passed, the counties could not help themselves, and were obliged to take charge of them. I relieved the Institution of about fifty under that law, and by refusing to receive what we can not properly accommodate, I prevent the Institution from being overcrowded. This is turning the tables. The matter is being brought right home to the people and the constituency of our legislators; and thus those men who were afraid to take the responsibility of sending home patients, if they want office to-day, stand a better chance of getting votes by promising to increase the capacity of the State Lunatic Asylum than any other way, unless they buy them. The counties want to get rid of their charges; they can not properly take care of them there, and the people say to the politicians: "You want to go to the Legislature, and we will support you provided you will increase the facilities and capacity of the asylum, that they may take all our insane there. We have to keep many of our lunatics at home, and can not provide for them. We want a new asylum built, or the present one much enlarged." Now, with this feeling among the people, every man who wants to go the Legislature promises to do all he can to increase the capacity of the lunatic asylum. I do not see how the judges of law courts can be judges in these matters. They can be judges in some things, but not in others. The Superintendents of asylums are the best judges as to the number of patients that can be safely and properly accommodated in their respective institutions, and I think that is the position they should take.

Dr. CALLENDER. The tone of some members, in this discussion, might lead some to think that we were on a crusade of general arraignment of Legislatures. I wish to say that neither the people of Tennessee, or their Legislatures, have ever shown an indifference to the welfare of their insane, or an indisposition to provide well and amply for them. Her meager accommodations are due

to the stringent financial condition in which she has been involved for some years. The people of Tennessee, were they able, would willingly support their insane at a rate *per capita* higher than some gentleman have spoken of.

I hope Dr. Compton will renew his motion.

Dr. BUTLER, (President.) We have no reason to complain of over-crowding at the Retreat. The Institution has been uncomfortably full, only now and then, and I have met that fullness by prompt and decided discharges.

The members of the Association, who were at Hartford two years ago, will remember that, in the reconstruction of the Retreat, we enlarged the building, but diminished its capacity. Formerly we have crowded in over 250 patients; now, our utmost limit is 160. The result has been that, at our last annual meeting, held a few days since, it was shown that the whole income of the Institution, and the excess of income over expenditure, largely exceeded those of any previous year; while the percentage of recoveries on admission was larger than those of any previous year during my superintendency. The bankruptcy, which was predicted as the result of adopting the plans of the Superintendent, has not appeared! —but in its place there has come to us a prosperity that we have never before known; the balance of the debt incurred by our reconstruction being now reduced to so small a sum as to give us no uneasiness.

Dr. COMPTON. I think the question has not taken practical shape. In order that it may I will make this motion: That this Association request Dr. Kirkbride to draw up a series of resolutions which will embody the apparent sentiment of this meeting, and present it before the final adjournment.

Dr. GRAY. I will second that if the word appoint be inserted instead of request.

Dr. COMPTON. I do not wish to make the Doctor do it.

The amendment of Dr. Gray was agreed to, and the motion, as amended, was put and unanimously carried.

The minutes of the sessions of the day were read, and on motion the Association adjourned to meet at 9 A. M., Wednesday.

WEDNESDAY, May 29, 1872.

The Association was called to order at 9 A. M., by the President.

A communication was received, and read by the Secretary, from Mr. J. W. Langmuir, Inspector of Asylums of Ontario, Canada, conveying his kindest regards to all his friends, to which an answer was returned by the President.

On motion of Dr. Curwen, it was

Resolved, That the thanks of this Association are due and are hereby tendered to Dr. E. T. Wilkins, of California, for bound copies of his able and interesting report on Insanity, presented to the members.

Dr. KIRKBRIDE. I hold in my hand a paper from Dr. Ray. I am glad to be able to say that he continues to feel the deepest interest in our specialty, and in the welfare of this Association, as is somewhat shown by the fact that he allowed me to bring with me this paper of his, which I now ask to have read. With your permission I will hand it to the Secretary.

The Secretary then read Dr. Ray's paper on "The Criminal Law in regard to Insanity."

Dr. NICHOLS, (The Vice President.) We are again indebted to our distinguished brother, Dr. Ray, for a paper of the highest scientific and practical interest. It is before the Association for discussion.

Dr. LANDOR. I must say that I had great gratification afforded me by Dr. Ray's paper. It is very satisfactory to me to know that my paper advocated very much the same principles that Dr. Ray has so well put before you. The paper I read has been put in the JOURNAL, and I do not know that I have any thing more to add to it.

Dr. WORTHINGTON. In the paper we have heard read it seems to me that the principle of the irresponsibility of the insane is so clearly demonstrated that nothing remains to be said on the subject. The principle on which we act in the management of the insane in public institutions is that they are not responsible for their conduct and actions, and consequently not suitable subjects for punishment.

Dr. LANDOR. I wish to impress the necessity on all medical men, who are obliged to give evidence in our courts, that they should have opportunity of having the prisoner's doubtful state of mind under observation for a continued period. Putting a physician in the cell of a person accused of murder to decide upon the sanity of the prisoner, never having seen him before, is a proceeding that I protest against, and shall protest against decision on such superficial examination. Therefore I would like to have it understood that authorities shall put these persons under special attention. Unless that is done some may be punished when they do not deserve it, and others escape when they are guilty.

Dr. RICHARDSON. I believe I have nothing to say, further than to tender my thanks to Dr. Ray for his able paper. I am personally acquainted with the doctor, and know him to be a thoroughly practical man in all his actions.

Dr. KIRKBRIDE. It seems to me that the little that has been said on this paper shows how generally the views of the members of the Association concur with those expressed by Dr. Ray. It reminds me of what Dr. Ray himself said at Toronto, that he did not like to attempt to reaffirm the laws of nature. I think this is somewhat of the same character. I have nothing more to say, as further remarks would only be to reaffirm what needs no reaffirmation.

Dr. WORKMAN. I do not know what to say. The silence of this body reminds me of an occurrence forty years ago in Montreal. A very celebrated violinist was there to perform who had several amateur assistants. They commenced falling off, one by one, until all had stopped. "Why don't you play?" he inquired. The reply by one of them was: "Our fiddles are all listening to yours." It is thus when anything comes from Dr. Ray. At the same time I think there is room for something. My friend, Dr. Ensor, mentioned to me, recently, a case which I think I knew in the commencement, and which I think is obscure. A young fellow was in the Toronto Asylum, in 1867, who had no insanity unless that of the moral type. He was a great liar. He wrote letters to his mother, and I dare say she believed all he told her; I believe her silly indulgence spoiled him. His father and mother took him home; he was not there more than a few days until he ran away; this in the winter season. They hunted some considerable distance, and finally found him and brought him home. He disappeared again, and the next thing I heard was an application last winter, from a clergyman, for information as to his insanity.

He was lying in jail, in South Carolina. He had been in State prison, and there murdered his cell-mate. They wished me, if possible, to go to South Carolina and give evidence, as of course written testimony would be of no service. I think it was fortunate for him, because I could not say anything in his behalf. I think he *knew* right from wrong quite well, but preferred the wrong because it *was* wrong. I could hardly regard him as an irresponsible, moral agent. He was under penal service for horse-stealing, and I believe he was in the last month of his imprisonment. If his sentence had been shorter, I have no doubt he would have turned up before to Dr. Landor or myself. When he does turn up, as probably he will, I shall take particular care to let his southern sojourn be known to our authorities.

I should like to hear a few words from Dr. Ensor on this case.

Dr. ENSOR. As the doctor has appeared to throw all responsibility upon myself, it becomes me, in self-defence, to make a few remarks, and to throw the responsibility where I think it belongs, upon the doctor, because when I was called upon to testify in the case I declined to do so. I had only an hour's interview with the man. As to his insanity or sanity I said I was unable to make up an opinion in so short a time, where there was doubt of mental disease. I am one who does not believe in moral insanity without disease of the mental organism, and I was unable to detect in so short a time any lesions of the brain—any diseased pathology. But I gave my evidence from the whole case. There was a large number of papers before the court, one of them from Dr. Workman.

Dr. WORKMAN. Only transcribed by me.

Dr. ENSOR. It certified that the man had been in the asylum three months. There were certain other officials certifying to the man's insanity, upon which certificates he was placed under Dr. Workman's care, and that he was there three months.

Dr. WORKMAN. Four weeks.

Dr. ENSOR. You were not there to see that certificate. I stated that the man had been accused of insanity and remained there three months, and it was highly probable that he was insane or the doctor would not have kept him in the Institution. One of the lawyers, or the judge, asked me what Dr. Workman's standing was in the profession. I told him that Dr. Workman stood at the top of his profession in this country, and it was upon that testimony chiefly that the man was acquitted. [Laughter.] The circumstances of the case are these: I will give them to the

Association that gentlemen may make up their minds themselves as to the sanity or insanity, the mental disease or the moral disease. He always was a bad man, I am told by the doctor, and the history of the case so indicates. He ran away from his parents after he went home from Dr. Workman's asylum, and ran away repeatedly, and finally made his escape from the cellar and went to Georgia, where he committed some crime. He was arrested and put in prison and served out his time. I think it was for some trivial offence. As soon as he was released he came over into South Carolina and stole a horse. He then took the horse into Georgia and sold it. He was arrested, tried and sentenced to two years imprisonment in the State penitentiary. While he was in prison for this offence he murdered his cell-mate.

There is one circumstance in the killing of this man that might be taken as evidence of insanity. He killed the man evidently while he was asleep—there is no question about that to my mind,—and without any provocation whatever. After the man was dead for some time, possibly several hours, and when he was cold and stiff in death, he took a razor and cut his throat from ear to ear. It would be very difficult to conjecture why he cut the man's throat after he was dead. He could not give any reason for it at all. I questioned him closely. I asked him whether he did not know it was a violation of the laws of God to murder. He said that that was the case once, but that the law had been set aside, and that a man might kill as much as he pleased without being responsible. There seemed to be a total moral obliquity. He did not seem to care whether he was sent to the penitentiary, hanged or acquitted. I think after he killed his cell-mate he went down in the morning, after the cell door was opened, and when questioned could give no reason at all for the murder he had committed. I think that that circumstance might possibly be taken as some evidence of mental derangement.

Dr. KIRKBRIDE. Did he give no reason at all?

Dr. ENSOR. He said he had killed the man, and when asked by the guard why he killed him, gave as the reason that he would not let him go to sleep, that he wanted to sing and would not go to sleep himself, that finally he took the cell stool and killed him. It was certainly false; all the evidence goes to show that he killed the man while he was asleep.

Dr. WORKMAN. I beg to state that the citation about the man having been three months under my care, is incorrect. He was only four weeks in the Toronto Asylum.

Dr. BANCROFT. I would like Dr. Workman to say some thing on the intellectual force of this person during his residence.

Dr. WORKMAN. We found him a very great liar, and very ungrateful, and we also found every evidence in him that he had been a spoiled boy. His father had been a pump manufacturer, who wished to bring his son up to the trade. His mother said, no; she wanted him to be a gentleman, and he was put to an apothecary. He was found to be a bad boy there. He had considerable ability, was plausible and had a moderate common school education.

Dr. STEVENS. Did this man ever manifest or give any evidence of delusion of any kind?

Dr. ENSOR. None at all as far as I know.

Dr. STEVENS. I think you stated at first when you arose, that you did not believe in moral insanity; at the same time you have since rather admitted that this man was laboring under some derangement of the mind, or insanity.

Dr. ENSOR. You misunderstood me, Doctor; I said I was unable to discover any pathological condition of the mind whatever.

Dr. STEVENS. And your opinion is that he must have been held responsible?

Dr. ENSOR. I am not able to give an opinion at all. I could do so, I think, if he were sent to the Asylum for thirty days.

Dr. PATTERSON. I understood the gentleman to say that this man said he murdered his cell-mate because he would not let him sleep; yet all the evidence went to show that he was killed while asleep. Was not that clearly a delusion?

Dr. ENSOR. It may have been a delusion; I am not prepared to say.

Dr. PATTERSON. I think all the circumstances and facts, when brought out, show that such was the case.

Dr. CALLENDER. Any thing from the pen of Dr. Ray touching insanity in any of its features and connections, commands the highest consideration, but especially his suggestions touching its criminal jurisprudence. So far as they are apprehended, I concur in the doctrines of this paper, and I do not presume to discuss it.

My object is simply to state a recent decision in my State, though the point involved is one more legal than medical.

A most atrocious murder was committed a year or two since, and the prisoner, upon trial of the fact of killing, was proven indubitably guilty. The plea of insanity was urged as a defence, and the medical testimony proved that also quite satisfactorily, I think, but the jury doubting, found a verdict of guilty.

The circuit judge charged as a principle of law, that when the fact of a homicide or felony was clearly proven to a jury, and the defence of insanity was urged, the insanity must be as clearly proven as the commission; in other words, that doubt as to insanity must weigh *against* the party on trial.

By writ of error the cause was removed to the Supreme Court, which overruled this feature of the charge of the inferior judge, and reversed the verdict; holding that, while the jury had reasonable doubt of the sanity of the prisoner, the benefit of the doubt must accrue to him. This ruling is in opposition to a number of previous English and American decisions, where the principle is asserted, that the law holds every man sane and responsible until the contrary is proven.

Dr. NICHOLS, (Vice President.) Before closing this discussion, the Chair will remark, that we can not, in his opinion, have the importance to the interests of science and humanity, of the examinations recommended by Dr. Landor, of insane persons who have committed criminal acts, too deeply impressed upon our minds. We are constantly called upon to give opinions in cases in which we have not had an opportunity to make the examinations of the patient necessary to make up our minds. In other words, we have not had the opportunity to be able to give a safe opinion—safe to the truth that will be shown by the subsequent history of the case, and to our reputations and usefulness in protecting the interests of the really insane. I can not too much commend the course pursued by Dr. Ensor, in the case he has related. I think we should have the independence and the candor to say that we do not know, when we have not had the opportunity of knowing. It also seems to me that we should avoid, as far as practicable, being led into these semi-metaphysical discussions on the stand, into which it often suits the purposes of the lawyers to try to lead us, and to which their own studies and mental proclivities sometimes incline them. The Chief Justice showed this inclination in the Roger case. With us, the question is purely one of pathological science. While we may have our opinions in respect to the ruling of the judge, in the case Dr. Callender has cited, in common with other men,—and perhaps it is a case in which our observations and studies render us quite as capable as any other class of men, of forming a just opinion,—it is not a subject or opinion that appertains strictly to our science and calling. As I have just said, the questions with which we have to deal are of a purely pathological character. In the case of the man who committed a homicide in South Carolina,

my aim would have been to ascertain whether he was laboring under a pathological condition at the time of the homicide, that led him to commit it,—whether his bad character was due to disease, or original defect of the brain, or to bad education, associations and habits. If due to ignorance and evil associations, the court, not we, must decide how far they extenuate the crime. Unless I was satisfied that this man's wicked conduct was a display of insanity, or was due to original organic defect, I should have been obliged to say that, as far as my opinion as an expert is concerned, he was responsible for the act. Experts will greatly simplify their inquiries into the mental condition of persons for the purposes of jurisprudence, and enhance the probability of reaching correct results, by eliminating from their minds, in the course of the inquiry, all confusing and irrelevant moral, social, or metaphysical questions, and confining their investigations to the single question of the existence or not of disease, or congenital defect of the brain, giving rise to mental aberration, or weakness, which led the party to commit the criminal act, or was the cause of legal incompetence.

Dr. CARRIEL. It occurs to me that there has a case recently come under my observation, some points of which may not be inappropriate at this time. Within a week I have been called to testify in court in relation to the insanity of a man, named Burchin. The prominent points in the case are about these. About a year ago he shot his son, killing him. The defence was insanity. I was summoned, after the trial commenced, to testify in the case; and here I can appreciate the remarks of Dr. Landor and yourself about the importance of having some opportunity of examining these cases previous to coming before the court to testify as to their sanity or insanity. In this instance, I never had an opportunity of examining the case, and never saw the prisoner out of the court room. Another difficulty in this case is, he was a German, and could not speak a word of English.

The VICE PRESIDENT. You might have carried an interpreter with you.

Dr. CARRIEL. This man one morning shot his son. He immediately left the house with his gun, and went to the woods near by, staid there three-quarters of an hour or thereabouts, and returned with his gun in his hand. By this time, his wife, who was the only person in the house at the time of the shooting, had gone after her son-in-law, and he had arrived. When the father came back, he seemed quite angry. The dead body of his son was lying on the

stoop near the door. He stood up in the door, near the corpse, without noticing him at all, took off his boots, picked up a bridle, went to the barn, got his horse and rode over to Jacksonville, a distance of eight miles. I do not know whether he had the intention of delivering himself up to the authorities or not, at that time. At any rate, he was followed and arrested there. On his way to Jacksonville, some of his neighbors, having heard of the occurrence,—one man in particular,—asked him how it was, “if he had killed his son ?” “Yes,” said he, “I killed him. I will see whether the father will be boss, or the boys be boss.”

Now for the history of this case. Some eleven years ago, he received a blow upon the back of the head with some instrument; this wound extending to near the top of the head. The physician who had charge of the case at the time, said it was a fracture of the skull. He testified that the man was in a comatose condition for three days, and that the skull was depressed the forty-eighth of an inch, or the thickness of a sheet of paper; that he treated the case about a week, paid no attention to the fracture or depression, but closed up the flesh wound. It healed up kindly, and that is all he knew about it. Then, it was in testimony, that this man was always a passionate man; he evidently is a man of rather brutal instincts, and at the present time is about sixty years of age. His own daughter testified to his being passionate, and that he quarrelled with his family. After this blow upon the back of the head she thought he was rather worse than he used to be. It was also said that sometimes he would wake up in the night and be quarrelsome; but as a rule he slept well; and all these ten years he managed his business as well as he ever did. He carried on his farm, and nothing was noticed particularly different from what he used to be. Thus so far as the testimony went, it was rather of a negative kind. Dr. McFarland testified positively as to the insanity of this man. I testified that his manner after the killing, his indifference, his acknowledgement that he had killed him, and willingness to give himself up to the authorities, so far as it went, might indicate that the man was insane; and so far as this man was a changed man after he received this injury. So far as he was more irritable and showed a changed disposition, it would indicate that this injury had affected his brain. But as I had had so little opportunity to examine him, and the evidence was not at all full, I did not express any positive opinion whether he was or was not insane. The jury sent him to prison for five years.

It seems to me that experts and physicians must confine them-

selves to the pathological condition which they find the man in. There may be moral insanity, and there may be, as was testified in this case, an epileptic state. Some of the experts, in this particular case, called this man in an epileptic condition.

Dr. NICHOLS. Had he had epilepsy?

Dr. CARRIEL. He had never had an epileptic fit; but it was stated he was in an epileptic condition. It seems to me that in order to establish an epileptic condition you must have an epileptic fit, either fully or partially developed. And so, to establish insanity in any case, it seems to me that it is desirable to find some diseased action of the brain.

Dr. NICHOLS. I think your caution, Doctor, was both scientific and wise.

Dr. RIEDEL. As to the manner in which experts should proceed, I beg leave to state a case which came within my knowledge, where a murder had been committed under peculiar circumstances, and in a place where none of these medical authorities were. Now, instead of sending for experts and shutting them up as prisoners, the prisoner himself was put in a strong envelope, and sent to the faculty, and handed over for safe keeping to the medical authorities, and kept there for two or three months. They communicated with those who had known the man, and finally were of the opinion that he committed the murder in an epileptic state.

Dr. BANCROFT. Has it not been a practice in some States, (I have an impression it is so in the State of Maine,) to commit such a case to the asylum while awaiting trial?

Dr. NICHOLS. That is the law in practice in Maine.

Dr. SHEW. In a case that was recently tried in Connecticut, although not the law of the State, medical experts were invited to examine the accused as frequently and at as much leisure as they chose. At the time of the trial, Dr. Butler, Dr. Hawley of Hartford, formerly of the Retreat, and myself, testified. Dr. Hawley and Dr. Butler being summoned by the defence, and I by the State's attorney for the prosecution. We visited her from time to time, and there was no doubt in the minds of the gentlemen named respecting the insanity of the woman; at the same time four physicians of standing in the profession, one of whom had been the family physician thirty years, testified as positively to her sanity. The court allowed every opportunity possible for reaching the actual facts in the case, and went so far even as to request the medical experts at the commencement of the trial to remain during the entire trial, hear all the evidence produced and then to give

their evidence at the last; not to have a hypothetical case placed before them, but on the examination of the accused after hearing all the testimony *pro* and *con*. Notwithstanding the length of the trial and the attempt of the court to reach, I think, the true state of the case, the jury disagreed, eight in favor of acquittal on the ground of insanity, and four against.

The court, instead of remanding the prisoner, took the responsibility of sending her to the hospital which I have the honor to represent; and to avoid any legal technicality which might be raised on the part of those interested in the conviction of the accused, I had the honor of being appointed "deputy sheriff of Middlesex county of the State of Connecticut;" the prisoner to be produced whenever called for at a subsequent trial. The woman has been with us several months, and has shown positive evidences of insanity. I think the judge and jury, and all concerned, are satisfied that it was the best course that could have been pursued.

I mention this only to show that there are some judges who seem to strive earnestly and conscientiously to arrive at the exact facts in the case.

Dr. PATTERSON. I question whether those persons wish to arrive at the facts of a case, who insist upon hypothetical questions.

Dr. SHEW. That was the great peculiarity in this case. We were requested not only to visit the prisoner several months before the trial, but at the commencement of the trial were asked to hear all the testimony and then to testify respecting the actual case. There was no protest entered by either side. It was at the request of the court; and I mention it more particularly, because I think it a step in advance of what has been pursued elsewhere.

Dr. BANCROFT. Have the courts in Connecticut made any formal change in this matter of hypothetical cases, or was it simply by general consent that the court referred to this form in this case? Has a change in the method formerly pursued been adopted?

The VICE PRESIDENT. I would also like to inquire of you whether a new rule has been put in force dispensing with the hypothetical cases, or whether this is only an individual case?

Dr. SHEW. This seems to have been an individual case. It was before the eminent Judge Pardee of the Supreme Court. I think it is the only ruling of the kind in that State. I hope it will have some influence in future rulings.

I have only to mention that in the charge to the jury, the court stated distinctly that if the jury believed from the evidence which had been introduced, and from the opinions of the experts, that the

woman was laboring under mental derangement, the result of disease, she must be acquitted on the ground of insanity. That also, seemed to be a step in advance of former charges, placing it entirely on the ground of disease.

The VICE PRESIDENT. I will ask you if you were allowed or required to express an opinion as to whether the homicidal act grew out of insanity, understanding you to testify that she was insane.

Dr. SHEW. We were required simply to testify that she was insane at the time of the committal of the homicidal act. The woman sent nine packages of gum drops, through the mail, to nine different families, some of whom she knew personally, some were related by marriage, and some were entire strangers. It was a very plain case. She was a very intelligent woman, married some twenty years, with a large family in good society; and yet it was proven by the testimony of the family physician, that during the last four years she had had periods lasting from eight days to two weeks, when she was in a semi-conscious condition, lying for days with a pulse at forty to fifty; that she would, while coming out of this peculiar condition, rush into the woods in her night-clothes, and be gone for days without the family being able to trace her; and yet, strange to say, the family physician could recognize no mental aberration, no disease.

Dr. WEBB. Some months since an interesting case in my State, came to trial, in which the prisoner, a well-to-do farmer, was charged with murder. The prisoner being very respectably connected, with many influential friends, the case excited much interest; circumstances pointed to him as the guilty party, and his explanations only increased the belief of his guilt. Among other pleas, and the one on which the chief reliance of the defence was placed, was that of insanity. Medical experts were called. Those of his acquaintance and living in his vicinity, together with many of his neighbors who had known him for years, thought him sane, and so testified; whilst on the other hand those summoned from a distance, and whose only knowledge of the prisoner consisted of one or two hours conversation with him in his cell, (and he no doubt well aware of their object,) thought him insane.

Here is a direct conflict between medical experts, well calculated to weaken confidence in all medical testimony. It is to avoid as much as possible in the future such occurrences as these, that I allude to this case at this time. The points in this case looking to an insane state or mind, as claimed by the experts, were as follows:

First, an irregularity of the circulation. Second, an impediment in his speech. Third, a greater contraction of one pupil than the other. It was claimed by his friends that he had frequently expressed fear of his family coming to want.

And just here I would like to ascertain the opinion of the members of this Association on the propriety of medical experts, in cases of this kind, where grave doubts exist, delivering opinions on so short an examination,—say only a few hours. Of course there are thousands of cases where no one could mistake; it is not these in which experts are required. Again, are we not liable to be placed in a false position by appearing, at least, as though employed on this or that side of the question, as interested for or against the prisoner?

Dr. WORKMAN. What was the crime committed in that case?

Dr. WEBB. Murder.

Dr. WORKMAN. Has he a family of children?

Dr. WEBB. He has.

A MEMBER. Who set up the plea?

Dr. WEBB. The plea was set up by his friends.

Dr. WORKMAN. I think the three symptoms are very significant. I would think these very important diagnostic facts.

Dr. KIRKBRIDE. Did you hear him stammer?

Dr. WEBB. No, sir.

Dr. KIRKBRIDE. Was it natural, or did it come on?

Dr. WEBB. That I can not say.

Dr. WORKMAN. How was the appetite?

Dr. WEBB. Good. He had sound health, to all appearance. He was found guilty of murder in the first degree, but has been granted a new trial. Now, Mr. President, I contend this man should have been placed in one of the asylums or some secure place, where medical experts could constantly have had him under their eye.

Dr. NICHOLS. I think it safe to say that no really scientific man who values his reputation, and certainly no conscientious man, will allow himself to be employed in the interests of one side or the other, in a criminal case.

It is one of the dogmas of our branch of the craft, laid down by Ray and other writers of the highest authority and character, and incidentally confirmed, over and over again, by this Association in its annual discussions, that no expert should permit himself to become a party witness, either by previous pledge or by the bias of his own feelings.

We are not quite so advanced in this country as to send persons by mail, as it seems they do in the kingdom of Wirtemberg, but I may mention that a soldier was sent to the government hospital from Fort Steilacoom on the Pacific coast, some time before the late war, by express *via* the Isthmus route. He was delivered in good order and made a good recovery.

Dr. WORTHINGTON. I have been very much interested in what Dr. Shew has said in regard to the manner in which the evidence was taken in the case of which he spoke. It is, I think, the first time that we have had information in this Association of such willingness on the part of law judges to place the decision of the question of insanity so clearly on medical grounds, and to allow to experts such ample opportunities for examination. It seems to me the fact ought to be known and that the case ought to be published for general information in the *JOURNAL OF INSANITY*, and in the law journals, also, if practicable.

Dr. NICHOLS. It seems to me that this woman will be tried again, and perhaps Dr. Shew will write a paper on the subject and present it at the next meeting of the Association.

Dr. WORKMAN. I was not long since called in a case in our Province. A young gentleman was shown me who had been a resident of M—. The symptoms were somewhat as others have mentioned. I had no hesitation in stating it was mental delusion. I should attach great importance to impediment of the speech, voracious appetite, irregularity in the warmth of the body, and the dilatation of the pupil on one side, different from the other.

Dr. GRAY. Dr. Shew, in the case he gives, shows the advantage of testifying on the facts, over a hypothetical question got up to represent the facts. Nothing could be more unsatisfactory for an expert than to be obliged to answer a hypothetical question. This question is usually drawn up by a lawyer, and generally now in our courts there are two such questions; these are drawn up by either side to represent the embodiment of the testimony which is to be interpreted by the experts; each counsel endeavoring to make every point tell in regard to the position he desires an expert to take. I have been at trials where I heard a portion only of the testimony, and again where I heard it all, or read that which I did not hear, and where I considered that neither of the hypothetical questions embraced the entire case. If an expert sits down with a lawyer and endeavors to point out to him, in the formation of the hypothetical questions, all the important facts which bear upon the question of sanity or insanity the case may present, that expert is

apt to be accused of taking part; or, as suggested by Dr. Webb, of making himself, as lawyers call it, interested in the case; and although it may be honestly done, with a view of arriving at the truth, such a statement evidently has the effect upon a jury that a man would have who appeared to be an interested witness; for, in addition, the question is usually asked whether he is not paid, and if so, how much? It adds then to his testimony, but in the way of depreciation. I have been in cases where I was satisfied that the answers of the experts were allowed little weight for that very reason. The rule in New York, however, is this: If the expert has heard all the testimony and been in court throughout the trial, and has examined the prisoner, he is entitled to give his opinion upon the testimony and his personal examination. If, however, he has heard only part of it, he is not permitted so to do.

The embarrassment to the expert of this method is, that it keeps him away from his duties and in attendance upon court for an indefinite period, whence has grown up this vicious method, as it seems to me, of hypothetical questioning. If a hypothetical question were one that had first to be agreed upon by the attorneys on both sides, as embracing the testimony, before being submitted to the expert, there would be much less discrepancy of opinion between experts; but as long as the present rule prevails, each lawyer being allowed simply to draw up a hypothetical question, just so long will we have the mortification of seeing experts in apparent or real antagonism; and not only that, but having the further effect of lowering the character of their opinions by creating the impression that experts may be found who, for a consideration, will testify on either side of any case. I am sorry that any work on jurisprudence sanctions that method of expert testimony. In regard to the remark made by some of the gentlemen, yesterday, as to whether an expert should answer questions or be drawn into answering questions as to the special form of insanity. Dr. Kirkbride states that he had always avoided the use of phrases characterizing cases as being of a certain form. While some men may be expert enough and able to avoid the persistent questioning of lawyers and evade their snares, it can not always be done. In my observation and experience experts are compelled to answer the question: "Doctor, what form of insanity is this?" Now, to say that I do not choose to put any form to it, is to stultify oneself as a medical man. If we, in our works on jurisprudence, make it so and so, we, as medical men, are bound to answer according to our convictions. If our works on jurisprudence

declare there are certain cases of moral insanity, and that moral insanity is shown in many forms, as pyromania, kleptomania or any other of these sub-divisions, we are bound, as medical men, to present the person, who is on trial for his life, as being within a category of some kind, otherwise we will stultify ourselves. If a man goes on the witness-stand as an expert in regard to fever, and yet declines to designate by name that fever, we should certainly think he knew very little about the case, and that he had not given sufficient attention to the differential diagnosis of that class of disorders. And I do not see how we can escape giving response before the court in regard to such questions ; hence the great objections to these generalities.

I have seen an expert obliged to answer after an appeal to the court, or say he did not know ; and I think the court was right. I have been obliged to do so against my will, and I think the court was right in making me answer, because it was sanctioned by precedent. The rule in our courts is, that neither counsel nor experts are permitted to read from books. I was at a trial, not long since, however, when the attorney read from Dr. Ray's jurisprudence and from other works, several propositions of Dr. Ray as to the characteristics of special manias, reading one by one, not as reading from the book, but giving them in the form of a question, and asking the expert's opinion upon it ; the expert would answer all the questions which Dr. Ray lays down there as to what constitute moral insanity and special manias ; or whether he agreed with this or that, and these questions being asked one by one, how can you evade them ? How can you escape from these questions which are found in accepted works on medical jurisprudence ? Then on the other hand, take the medical works on jurisprudence. They differ. They are face to face with each other, and yet you are compelled to say they are standard works. What sort of position is a man to take ? So, I have been in a case in connection with a railroad injury, where, although the court would not permit the reading of books, the counsel took Brown-Sequard, and examined me upon many of his propositions, asking my opinion upon each, and its scientific relations to the case. Next they examined me upon Radcliffe, and put questions upon which these two authors apparently differ in regard to certain morbid conditions of the spinal cord and symptoms connected therewith. Then they put questions relative to the different forms of spinal disease, the symptoms which appear or do not appear in meningitis ; and the differential diagnosis between congestion of the spinal cord and meningitis,

and simple spinal irritation. How could one escape designating these conditions and the symptoms of each?

The physician was not permitted to say simply there was concussion of the spine, because if he said that, he would say nothing of interest to any one; or should he say shock, he would be giving no human being an idea of the condition of the party. They brought medical witnesses, and I think properly, down to their own authorities, and said we want you to diagnose the actual condition that you find the person in; and if the condition varies, we want to know what the variations are and in which category you place this patient. For my part, I should wish that the expert might, in all cases, be permitted first to examine the party, and if there is found sufficient evidence, in any preliminary examination, to throw doubt upon his sanity, then that such a case should be sent to some asylum for examination and inspection, to determine the question absolutely. A law has recently been passed in our State looking to this end. This law was passed in 1871 authorizing the Governor and Courts of Oyer and Terminer to appoint a commission to examine the condition of any person on trial or under indictment and supposed to be insane.

There are many trials in which the question of insanity is brought up at the last moment, and doctors are asked to express their opinion. In a preliminary consultation with the counsel the question is asked them as to what their opinion would be if the testimony showed the existence of certain facts. If the opinion of the expert is favorable, it will not be difficult for the counsel so to bend the testimony as to make it support the views of the expert and the theory of the case.

In regard to compensation, I think it is a true rule that the compensation, whatever it is, should be designated by the court. In a provision of the law for the examination by experts before trial, the court or the Governor might designate to the County or State treasurer what is just and reasonable, and upon that a warrant might be issued for payment. I think this a proper course to pursue, nor do I think the idea of such compensation would have a tendency to bias the mind of any man who is reasonable and conscientious in regard to his professional status.

Dr. NICHOLS. Do not cases arise in your State in which the friends of those upon trial wish your testimony, and in which the court would not call you?

Dr. GRAY. Certainly there are such cases.

Dr. NICHOLS. And therefore, if you get any compensation at all, it must come from the friends?

Dr. GRAY. Certainly, as the law now stands.

Dr. NICHOLS. What do you do in a case of that kind?

Dr. GRAY. If I should be asked, I should render an account the same as in any other case of equal professional responsibility.

As to bargaining, it has been stated pretty generally that experts have received, or been promised certain amounts beforehand; that probably applies to very few.

Dr. NICHOLS. It seems to me perfectly proper to give the full facts of the case, no matter by whom employed. An expert is no more bound to testify in favor of the prisoner, if it is against his judgment as an expert, than he would be if employed by a patient to examine his lungs, and testify that he had no disease.

Dr. WORKMAN. I could not.

Dr. NICHOLS. The testimony of an expert is frequently desired by the accused or his friends before the trial. They would want to know what Dr. Gray would probably testify to beforehand, and they do not want him to be subpœnaed unless he would testify to the man's insanity, it might be, and they might want you to come from Canada where they could not subpœna.

Dr. WORKMAN. I remember once being placed in that position, and a lawyer endeavored to elicit from me what that testimony would be. I answered that it would be given in the witness box.

Dr. GRAY. A week before I left home one of my assistants was subpœnaed by the court upon the part of the defence, in the case of a man who had been at the asylum, a patient previously. In that case the district attorney paid his expenses, as the prisoner was without means.

Dr. RIEDEL. Not one of these hypothetical questions, I take it, ever covers the entire facts of the case?

Dr. GRAY. No sir, not necessarily. They may have nothing to do with the case. It is for the lawyers afterwards to show to the jury whether this or that hypothetical case embraces the facts, and it is for the jury to determine whether the facts in question are the facts that are proved. In one case, recently, the court was explicit in instructing the jury that if they found either of the hypothetical questions were in exact accordance with the facts proved, they could then give weight to the opinion of the expert. If they found the hypothetical questions were not, then that testimony was to be considered as not having weight.

Dr. PECK. I do not desire to prolong this discussion, but having been called as an expert in a case in our State, I will briefly state to the Association the facts in connection with it.

It was a case of homicide; a man by the name of Bander had shot his wife. The career of this man had been of a reckless character. He was somewhat dissipated, and had indulged freely in the company of bad women. He finally became enamored with a pretty girl of the frail class, and proposed to marry her in order to have her entirely to himself. They were married, but the husband had not much money, and could not fully supply her extravagant demands. She soon formed an alliance with another man and eloped with him. The husband pursued the couple, following them from city to city, until he found them at Toledo. After one or more interviews with the wife, it appeared that they had agreed to live together again, but something occurred that led Bander to think that he would not be able to retain possession of her, and he purchased a pistol seemingly with the express purpose of shooting her, which act he deliberately consummated. He was immediately arrested, and in due course of time brought to trial. The defence set up the plea of emotional insanity, and employed as principal witness a medical gentleman from Cleveland, a professor in one of the medical schools of that city. His testimony was decidedly in favor of the plea of emotional insanity. Before the case was closed I was sent for. I examined the prisoner personally; obtained all the evidence possible from the history of the man, both before and after the commission of the crime, and failed to find the least evidence of insanity at any time in the history of the case. A hypothetical case was made and presented also. After having given as good a definition of insanity as I was capable of doing, the judge required that I should state in distinct terms whether Bander was a sane or an insane man when he committed the act. My answer was that he was not insane to the best of my knowledge and belief. The verdict in the case was murder in the second degree. Bander was placed in the penitentiary, and I have watched his case with a considerable degree of interest, and up to this time, (nearly two years,) he remains sane.

Dr. STEVENS. The gentleman from Ward's Island, Dr. Riedel, a few minutes since, asked Dr. Gray whether the hypothetical case was intended to cover all the facts of the real case. This is an interesting and important matter. In all trials, as far as I am informed, this is the intention; but I believe that experts are often embarrassed by the hypothetical cases. It would, I think, be

better, as Dr. Gray stated, to either have the attorneys on both sides agree upon all the points of the hypothetical case, or have none at all. There appears to be almost a necessity in a majority of instances for presenting the substance of testimony in this form, growing out of the fact, as Dr. Gray says, that experts can not generally be present during all the trial. Still there is, even in the best arranged hypothetical cases, great difficulty in the witness having a full knowledge or appreciation of the facts. In the Fore trial, a hypothetical case was presented by the attorney for the defendant, and it was not objected to, either by the opposite counsel, or the court. As I had heard all the testimony, I saw several discrepancies, and stated to the court that if I was to decide on the testimony as I had heard it, I would express one opinion, and if upon the hypothetical case, I should decide differently. This led to considerable discussion, and the witnesses were instructed to give their opinion upon the testimony as they had heard it, or as by reading they had become acquainted with it.

Dr. SHEW. I wish we might have some tangible expression of opinion of this Association that would cover the entire ground, to be used by the members in their several localities, and also for the guidance of court and counsel. Last year I was exceedingly interested while listening to Dr. Ray's paper, but I certainly had a feeling of disappointment when he closed the paper, and, as you remember, came to the conclusion that the present mode of giving expert testimony was, perhaps, as nearly correct as anything that could be devised. I experienced a feeling of deep disappointment and I think others shared that feeling at that time.

Reading a synopsis of his paper afterwards I could come to no other conclusion than that he thought the presentation of hypothetical cases was the true method of proceeding. Perhaps I was mistaken, perhaps I did not understand his paper. It seems to me there should be some change, as Dr. Gray has said. If we could have personal intercourse with the accused and direct methods of investigation for several days or weeks or months, and then listen to the trial throughout, as in the case recited, I think we could get at the facts very nearly in a large proportion of cases, and without injury to persons who are really insane. I doubt whether those who are criminals in the true sense of the word would be able to escape the just punishment of their crimes in such cases. But where we are required to give opinions simply upon hypothetical cases agreed upon perhaps by the counsel, there may, as Dr. Stevens remarked, be a discrepancy which the counsel or the court might

not be able to understand or appreciate, that the medical expert would. I remember when a student and assistant at the Auburn Asylum for Insane Convicts, that during the year 1862 there were five acute cases admitted, coming almost directly to the asylum after being committed to the prison. One German, from New York city, having committed murder, was tried and sentenced to Sing Sing prison, and within seven weeks died. This was as perfect a case of acute mania as I ever saw, yet the trial had not been interrupted by the plea of insanity.

Another man, sent from Rochester, N. Y., the second day after his arrival was transferred to the insane department and died within two weeks. The post-mortem examination revealed a bloody tumor in the *cerebellum* that weighed nine ounces. A subsequent investigation showed that he had suffered from this growth at least eighteen months. These cases led me to suppose that there was greater danger of doing injustice to persons really insane than to those not insane who have committed crimes and endeavored to slip through under the plea of insanity.

I wish we might have a committee of some of our oldest and ablest members appointed to prepare resolutions or a statement that would cover the whole ground to be presented at our next annual meeting.

Dr. WALKER. I have a fancy that this whole matter of giving evidence in courts is one surrounded with a great many difficulties, whichever view of the case you may take. I have had pretty large experience as an expert in the courts of New Hampshire and Massachusetts, and am constantly being called into court in cases of greater or less moment. I am not clear, to-day, which course it would be best to pursue, whether to give evidence in hypothetical cases, or evidence in hand as presented to the court. In both cases there are difficulties that impede one, and in some cases difficulties which are almost insurmountable. I am free to say that any effort on our part will not induce the courts to change their present course of procedure in this matter.

A few months ago it occurred to me in the Supreme Court of Massachusetts to be permitted to give my opinion upon the facts as presented in the case. I did so, and then immediately came up the difficulties in the case. I was asked upon what I based my opinion of the patient's mental condition. I replied that while she had staid two or three years in the city of Philadelphia, I was informed upon the facts stated, that she had pursued no course calculated to earn her own living, but lived upon the charity of

friends and mostly strangers. Upon that instant arose a dispute between the counsel as to the facts of the case, and upon reference to the judge's minutes it was found that the fact was distinctly stated and sworn to, that the person in question did nothing for a living, but lived upon the charity of utter strangers. On the other hand there was the testimony of the prisoner herself that she had supported herself and her children. The question put to me was, "Upon what do you base your opinion? which was true?" Then the dispute was that that was not the case. It was distinctly sworn that she did support herself and children. There comes the objection of the bar, in some, if not in all, of our courts, that if a physician gives an opinion upon the facts, he makes himself a part of the jury, and judges of the evidence, whether it is true or not. I think for my own part, for comfort and convenience every way I would as soon be examined in any case by hypothetical questions as on the testimony. Either way the lawyers will give their views of the case, and they will have to give an opinion after the courts have allowed you to give your opinion. It amounts precisely to a hypothetical case.

I should be very glad, indeed, if there could be a universal rule established by which we could all be governed, but I despair of seeing such a state of things brought about in our day. After all, if we enter the courts as experts, we ought to carefully inform ourselves as to the condition of the accused, and ascertain to our satisfaction whether the disease exists or not, and then if the actions of the accused were so influenced by the disease, that the crime, if crime was committed, was the result of the disease. If we can satisfy ourselves on those two positions, grounding our position solely on them, undismayed by any threats of lawyers, and without being turned away by any side issues, which they may choose to bring up, I think in a majority of cases we can get through with our part with comparative ease and with credit to ourselves and the profession.

Dr. GRAY. You would not feel that you had as much responsibility in giving an opinion on the hypothetical case as if you were obliged to take up the testimony and give an opinion as to the case itself?

Dr. WALKER. In the one I should take the case as presented in the hypothesis. In the other if I take the evidence they may say it was not proven. If I say it was proved, I make myself liable to that extent.

Dr. WILKIE. During the past year we have received twenty patients from the three prisons of the State, ten of whom were insane when they entered the prison. One of these committed suicide about two months after his reception. This person, who had committed murder, had been discharged from an asylum of a neighboring State where he had been confined for two years and a half. On a post-mortem examination it was found that he had organic disease of the brain which evidently had been of long standing. These cases are not uncommon. I am satisfied that the insane are as liable to suffer as the guilty are to escape. It seems to me that these hypothetical cases might, however, be disposed of, and that we might arrive at accurate conclusions if a rule could be established by which the defence should notify the courts at the proper time before the trial commences that these criminals could be placed in some asylum and their condition fully ascertained before trial takes place.

Dr. KIRKBRIDE. I move that the paper take the usual course and be laid upon the table.

The motion was agreed to.

The President introduced to the Association Dr. A. B. Wolcott, Surgeon-General of Wisconsin.

Dr. CURWEN. I am requested to read the following: "Mr. Langmuir, Inspector of Asylums of Ontario, at Toronto, would feel much obliged to members of the Association if they would place his department on their list of exchange reports."

On motion, the Association adjourned to meet at 8 P. M.

The Association spent the afternoon in visiting the excellent arrangements of the State Hospital for the Insane at Madison, under the control of Dr. McDill.

WEDNESDAY EVENING, May 2.

The Association was called to order at 8 P. M. by the President.

The Committee on Business reported that the first business in order was some remarks by Dr. Landor, on some forms of hysteria which simulate insanity.

Dr. LANDOR. There being no paper before the meeting, the Secretary requested me to relate a case of hysteria I was mentioning

last evening in conversation with him. I do not like trusting to memory for the description of such cases, but if it is of any interest to the Association, I shall gladly comply with Dr. Curwen's request.

A few months ago there was an application made for a child only twelve years of age. It was stated to be a violent case, and requiring speedy attention. We do not generally take children into the asylum if we can avoid it, and I, at first, refused to take her in. But representations were made that the case was an exceedingly violent one, with disease of the heart, and that the child was ripping away at her clothing, and so on, and then I took her in. She was brought into the asylum bound hand and foot. She was wrapped up like a mummy, and making use of the most beastly language. You would wonder where a person of that age could acquire it. She was exceedingly impatient and excitable. Her skin was dry and rough, and she was always talking and complaining of pain, first in one place, and then in another. Her appetite was not bad, and she always slept at night, but all day she was in a perpetual state of excitement. She would not move, said she could not use her limbs.

I look upon such a case as not one of insanity proper, but excited mental action in its nature reflex. I look for something other than in the brain. To ascertain whether she had worms, I gave her santanine and turpentine. There were no signs of worms. I was confident there was no disease of the brain, and that the symptoms were those of spinal reflex action. I further examined her heart. When she was frightened her heart palpitated violently, but there were no signs of disease around her heart, except her blood was thin. There is another source of irritation which might be uterine. The child was a little more than twelve years. Her mammal had developed, but she had never menstruated. I had another case in which I examined the vagina, and found that the hymen was imperforate, and when it was opened, a quantity of menstrual fluid escaped, and that child got well speedily. There was nothing of this sort in this case. I failed to find any existing cause, but yet it may have been caused by the defective action of the skin, which was exceedingly dry and scurvy, with no action in it. I put her on a good diet, gave her wine and cod liver oil. She complained immediately of pain wherever touched, but oftener over the stomach, and she would shriek when she saw a hand approach her. She could not bear a blanket at all. If you offered her something that she liked, and while she was taking it you put a hand on her stomach, there was no pain at all. That pain would remain for a day

or two, and then she would complain of pain somewhere else. She would not walk, but she could still move along, because if I placed anything that she wished for, a few yards from her sofa or chair, she would get down on the floor, and with the use of her arms and thighs get it, but without rising to her feet. Seeing that she was ready to use some exertion for what she wanted, I made that a ground to benefit her. She would not take cod-liver oil, and I would not give her anything until she did. She very soon learned to do what was asked, for what she wanted. She would not answer, although it was perfectly clear she knew what was said. She would keep an eye on one constantly. If one put a common dress on her, she would tear *it* to pieces directly, but if one placed a nice dress upon her, and put ribbons upon her, and spruced her up, she took good care not to tear her clothes. She would bite her arms, but never *bit* herself to any serious extent. She would sometimes take strings off her dress and tie them around her neck. The nurse would say, she is going to strangle herself; but when it would become inconveniently tight, she would remove it again. She would not talk in the direct sense, although she would swear; but she would do something for one of the girls, or attendants, whom she took a great fancy to. But she would not walk. She had to be carried out to the shade of a tree, and there permitted to remain. When told I would not give her anything until she walked, she still would not walk. This case seems to be not a case of insanity direct, but hysteria. She has certainly gained a good many pounds in weight under good diet, and I think when she begins to menstruate, she will get well. She may get worse, until it runs into a case of insanity.

These cases seem to be confined not to females, but boys also are subject to similar diseases. During the past ten or fifteen years, I have seen four or five, not in the asylum, but cases of practitioners, where I was called in. In large cities, I think there are more cases than in country sections like ours. I remember a case in England, of a young lady a little older than this one. She would not walk for seven or eight months, but would lie upon a sofa, and had done so for months. I won her confidence, and persuaded her to walk, and in a few days she went anywhere, although she and her friends also insisted that she had lost all power of motion.

I believe these cases are mostly moral. If they learn to look upon you with confidence, I believe you will have unlimited mastery over them; but I believe at the same time that there are some cases coming into one's hands over which we can not obtain that

mastery. I do not believe I can obtain the mastery over this child. I acted with moral persuasion over her, but thinking she could walk, I lost influence over the child by insisting that she could. I do not think I shall be able to regain it, but I am under the impression that some one else may. I believe that I can get no more influence over her, although she has transferred her obedience to my assistant, Dr. Lett. But if she fails to put confidence in any of us, I shall certainly recommend that she be sent to Dr. Workman, for him to try his powers over her.

I am confident there is no disease beyond nervous action; it does not amount to insanity; it is irritation. I can not better describe it than as reflex action from some hidden cause. It may be due to something other than uterine.

I believe there is a similar state of things arising from some irritating source, but that the true treatment is to remove irritation, and to acquire confidence, and so build up the system, if reduced. That is all I have to say about this case. There must be gentlemen here who have such cases, and I should like to have their views upon them. It occurs not only in girls but in boys, and if in boys, accompanied with self-abuse, I consider it a most serious case, and less likely to end in cure than in boys without; because when about the age of puberty, it produces such a decrease in the strength, as to cause serious local mischief, which ends in insanity. I do not think this is so mischievous in the case of girls, even when they have been addicted to self-abuse. This girl is not. She has been carefully watched; it is essential that they should be watched.

There is nothing in this child to indicate any habit of self-abuse or any excitability about the organs of generation. Still there may be something, and I think when these organs are properly established the child may get better. But of course there can be no long continued irritation of the mental functions without producing corresponding affection of the brain itself, and that may be the case in her. But such cases, from what I have seen or read, may recover, and I am of the opinion that she will do so.*

*AUGUST 6, 1872.

This child has perfectly recovered. She first recovered her gentleness of tone and manner. She spoke properly and in a child-like manner, but she could not walk. She said her legs were powerless. After a week of this improvement she said she would stand in a day or two. She did and began to walk. She now walks, talks, and plays like any other child of her age, and has for six weeks. I shall keep her a month longer, and I am sure if she is well and generously dieted and kindly treated, she will not relapse.

H. LANDOR.

Dr. NICHOLS. Before this discussion is commenced, I should like to ask Dr. Landor if he will draw the symptomatic distinction between insanity, the condition commencing in hysteria, hysterical insanity, and that state short of insanity?

Dr. LANDOR. I never like to draw lines between these points, but I think there is a marked line in this way, that that child's excitement does not last longer than twelve hours, and she sleeps perfectly during the night. Cases of mania do not generally, they are often sleepless for nights together.

She has a certain intelligence in regard to what is said to her, and an amount of self-will founded upon that. She is not the reckless maniac upon whom words make no impression, but she is constantly changing according to the form of her excitement. She may be cursing one day, and lying on her back and singing and moaning the other. These changes come suddenly. They are then accompanied by these pains which are caused by no local affection. I never do any thing for these pains, because I believe if you call the attention of the child, by making local applications like turpentine, or sedatives, or any thing else, you fix the attention to that part, and it will last longer than if you let it alone. It will change, in a short time, to the ankle, or somewhere else. There is a constant change that points out the difference between this reflex excitement and cases of mania. I do not know that I should draw any more marked distinction than that. In fact, I do not know that I express very clearly the phenomena impressed upon my own mind between these excitable characters and the permanent maniac.

Dr. BARTLETT. Would the Doctor consider the child responsible when in this condition?

Dr. LANDOR. Whether she is responsible or not, she knows very well what she is doing.

Dr. BARTLETT. Again, suppose it is possible she may commit some crime in this condition?

Dr. LANDOR. I do not wish to mix up a legal point with the medical. I would rather far hear tell of proper treatment and diagnosis, than go into a hypothetical case on crimes she might commit. I should like to know whether such cases are common in large cities,—I should think they were,—whether gentlemen have met with cases of a similar nature.

Dr. WORKMAN. I suppose we have all, in our time, met with cases very similar to that described by Dr. Landor. I met with one in a young lady, yet I was not convinced that it was a case of insanity.

With regard to refusal of locomotion by this patient of Dr. Landor, my case might be called a parallel. The young lady to whom I refer could not walk at all; she had to be carried upstairs. I assisted in conducting her to her ward, and she remained persistently in bed. One evening, while reading, I heard a good deal of fun going on; one of the patients was playing a piano. Taking a peep into the room, there I saw this young paralytic lady dancing like the rest of them, but the moment she saw me, back she went to the sofa as bad as ever. I think Dr. Landor adopted the best course,—that is, not to attempt to force his young patient to walk. I doubt whether these are cases of insanity, but I believe they may develop, finally into such. I think it is in the early periods of life that we notice these symptoms.

Dr. LANDOR. The mamma is developed.

Dr. WORKMAN. I remember a case of paralysis in a female of seven years duration; the person had to be carried to bed like a babe. Suddenly she walked across the room, and thenceforth continued to walk. I believe she had the power of locomotion all the time, but no volition to it.

Dr. GRAY. In the various works on hysteria we have not only the extraordinary physical manifestations mentioned by Dr. Landor, but also cases where there is extreme vomiting. Persons who have seen such cases will remember also that in many instances you could determine that it was done without any nausea and as a voluntary act, while in other cases the act is manifestly involuntary, vomiting up every thing even to a teaspoonful of water. There are cases where persons have swallowed all manner of indigestible materials. It has been a question in my mind what could induce a woman to swallow a lot of pins, small pieces of stone and charcoal. I have known women in that hysterical condition to pass articles, which would ordinarily cause pain, into the vagina and into the rectum. They would hardly do that as a mere vicious act or to gratify any sensation. My friend, Dr. Workman, suggests to me that it is an act of diabolism.

I think in recalling such cases that a majority, where hysteria is marked with such characteristics, eventually pass into a state of insanity from which they rarely, and I think in a majority of cases, do not recover. The line of treatment suggested by Dr. Landor I think is the true one. But from my experience, and I have seen a great many of these cases, I have little confidence in complete recovery.

Referring to a number of cases, ten or twelve I think, (turning

to Dr. Van Deusen,) you will recall one in which this hysterical condition continued for a number of years, and in connection with the development of puberty. The child had, apparently, the most violent epileptic seizures, all simply hysterical attacks. She finally recovered after menstruation was fully established, and proved to be a very quiet, discreet, orderly girl. She has since married respectably and continued well, but this is an exception.

Dr. CALLENDER. The cases described induce me to allude to one placed in my charge within the last month,—a youth in his sixteenth year. Perhaps it is proper to say that he was a very precocious child. I had some knowledge of his history. A few years ago he was placed in business by his father as a clerk to an establishment in the city, and by his vivacity and attention to business acquired the confidence and esteem of his employer. Perhaps he was overtired in this.

Last July he went to a neighboring county on a visit and followed a thresher through the field in the sun. A friend of the family, with which he was staying, discovered him about sunset with his face greatly flushed and his system prostrate, and bade him go to the house, where his head was bathed; but perceiving during the night that there were symptoms of fever, they took him home on the next day, where active fever was developed. During that night or the next day, he became comatose and according to reliable statements did not rally from that condition entirely for nearly four months, losing the power of speech. A number of medical gentlemen saw him and for several days his life was despaired of. His speech was recovered suddenly. He gradually improved after this occurrence and became the subject of great mental activity and bodily restlessness. The parents lost all control of him. From a model of youthful propriety he became wayward, obstinate, unkind and viciously disposed in many ways. His language was profane and outrageously obscene even to his mother, and his presence was intolerable in the company of females. He talked incessantly and incoherently, and frequently wandered or ran away from home. During the past six months he has been the subject of causeless exhibitions of anger and rage, and, on one occasion, struck at his mother with a club, and finally became so violent it was necessary to restrain him closely. After consultation he was taken to an asylum in a neighboring State, where he remained about a fortnight and, as was said, was discharged as not insane, or at least not a fit subject for asylum confinement. On being taken home he grew worse and

finally escaped. He was recaptured and about four or five weeks ago was brought to me in this condition. In the hospital he is the embodiment of every mischievous propensity belonging to bad boys, and is the pest of his ward. He employs himself in kicking at the legs of patients disposed to be quiet, and otherwise annoying them, and the constant fear is, in spite of all vigilance, that he will be seriously injured by some infuriated man. This has made necessary his seclusion for a great portion of the time. He is not a sleepless subject; his appetite is strong to voracity, indeed is abnormal, and he is well nourished. His countenance is animated, sprightly and pleasing. His frame is not developed proportionately to age. His aspect is that of a bright, kindly, amiable lad, but his character, if that be it naturally, has undergone an entire transformation, except as to mental activity, and it, indeed, is morbid. Particular inquiry was made as to abuse of the sexual organs. The male parent thought masturbation an impossible supposition. The patient was asked and frankly admitted it, but declared that he had never carried it to excess at any time, and for a considerable time had abandoned the habit. He has been carefully watched, and I believe that he is not now guilty of the practice, and am inclined to accept his statements that he was never constantly addicted to it, and that it can not be considered a cause of his present condition.

My opinion is that it is due to the exposure to the sun and heat operating upon a peculiarly delicate nervous organization—the impression being stronger at his particular age; and that there is some sub-acute irritation of the brain and its meninges. It does not fall precisely within the category of cases under discussion, but has been related as an instance of juvenile mental disorder occurring during the pubescent age. The treatment has been shower bathing to the head, setons, restricted diet and purgatives. I am not disposed to regard the issue as favorable but fear that irreparable mischief has been done.

Dr. WORKMAN. Do you know anything of the family?

Dr. CALLENDER. I knew the father. He is from Virginia, and insanity is not known in his family. The same can be said of the maternal stock.

Dr. BANCROFT. Within a few months I was invited by the attending physician to see a little boy between thirteen and fourteen years old, and from what I saw and learned judge it to belong to the class of cases referred to by Dr. Landor. He is the child of healthy, active, intelligent parents—the father an excellent

mechanic. He had recently come from school, where he was regarded as a good scholar, a bright and good boy with no peculiarities noticeable. He had not reached puberty, and his father could get no evidence of the habit of masturbation. At first the boy was nervous and excited by turns, and soon passed into a condition alternating between a perfectly natural and quiet condition and one of high excitement. I saw him pass through both these conditions, and when excited it required the whole family to take care of him. The excitement, however, did not appear like that of the few insane boys whom I have seen. In his periods of quiet there was an expression of cunning, a funny twinkle in the eye. He seemed to watch for an opportunity to evade the vigilance of his attendants, and when it was offered he would rave and become unmanageable. He showed great cunning in escaping from the house, and when in the paroxysm was very destructive of everything within his reach. A marked feature of his excitement was an apparent spirit of mischief. The recklessness he exhibited when in the care of his mother, he restrained in the presence of his father, whose approach always had a marked effect in diminishing the demonstration. The constant attendance of the father, however, was not sufficient to prevent the recurrence of the paroxysms. He had a good appetite, but lost a little in weight. The treatment advised was gentle management, with a moderate use of sedatives and tonics and a regulated regimen. I have since learned from his father that this plan was continued some weeks when Dr. Clark, of Boston, was consulted, who, after careful examination of all the symptoms, called it a case of hysteria in the male. The same plan of treatment was continued, and, in three months, the active symptoms subsided. He was still morbidly excitable, but his power of self-control was so far restored that he was trusted as carrier of parcels for delivery from a retail shop, with every prospect of complete recovery. I failed to mention that, in the most excited period, he would stop as quickly as if shot and seem entirely unconscious. In whatever position he might be at the time he would remain fixed, until, as suddenly, he would leap like a fox and pass into the wildest excitement.

Dr. CURWEN. Was epilepsy connected with the case?

Dr. BANCROFT. There were no symptoms of epilepsy.

Dr. RANNEY. I have had a few cases under my care, of children under the age of puberty, or in whom the period of puberty had been protracted to a later period of life than usual. The cases I have in mind were girls, and three of them had this in common,—

a stature below the medium of persons of their age. One was sent to my care as a case of epilepsy, but careful observation and inquiry led me to believe it was something else,—although the treatment with the bromides proved to be the most appropriate one. Another case was said to be the result of, or to have followed, fever, but on inquiry it seemed to me to have been an attack of disease with marked cerebral symptoms. If a fever did precede obvious mental disturbance, it was of some three months' duration. There was mania of the most unmistakable character before she left home, if the representations made were true, and they probably were, as the case was carefully inquired into by the county commissioners of insanity, who send all patients to the hospitals in Iowa; and yet during the three months she had been under care we have seen no excitement or irritability that could account for her being sent to the hospital, or hardly warrant her being retained there.

I recognize with Dr. Landor the great importance in these cases of acquiring influence over them by gaining their entire confidence. It is not only necessary to acquire that general confidence which it is desirable all our patients should have in us, but a peculiar unwavering confidence is the *sine qua non* of successful treatment. Two cases I have treated, recovered in the course of two or three years, and before menstruation was established.

Dr. VAN DEUSEN. The case given by Dr. Landor brings to mind the history of several patients presenting similar symptoms, which were regarded as analogous to the choreic and other nervous disorders, generally attributed to ovarian irritation accompanying the development peculiar to that age. Under treatment designed to reëstablish the general health, all fully recovered. In another class of patients, usually of marked unhealthy mental organization, somewhat similar symptoms are frequently developed at a corresponding period of life. In these cases, which are readily distinguished from the former, there is generally a gradual loss of mental power, ending in dementia.

Dr. ENSOR. As corroborative of what Dr. Landor has said as to the importance of establishing confidence on the part of patients towards the physician, I may be excused from stating the history of a case that came under my observation about twelve years ago, which seemed to me at the time to be a very remarkable case, and which I was then unable to account for. The girl was about fifteen or sixteen years of age at the time I was called upon to see her, and she had not walked a step or spoken a word for the space

of about four years. She had had scarlet fever. Before the fever she had been bright and active. I was told that she had the fever in one of the worst forms; she had been under the care of three physicians, and they had not been able to do anything for her up to the time her parents sent for me. I went, although it was not within the scope of my practice. I learned that while she had scarlet fever, she was delirious for some time, and on her recovery she had lost her power of locomotion and of speech. Some of the physicians were inclined to believe that it was a case of paralysis; there was considerable difference of opinion. I went, with another medical man, to see her, and after a careful examination we were satisfied that there was no loss of muscular action,—that the girl lacked volition power,—that she simply believed she could not walk or talk, and acting under that belief she made no attempt to do either. A great deal had been attempted in her behalf. Her spine had been blistered, and she had been subjected to various other kinds of treatment, all without any beneficial effect whatever. I told the parents, who were anxious about her, that I believed the case one of nervous disorder, I saw no trace of paralysis,—neither did the physician who was with me. There was no evident contraction of the muscles—no wasting away of the tissues, nothing to indicate paralysis. I thought it was probably hysteria, or some kindred affection of the nervous system. I should have stated that the girl had not menstruated before the disease, but she had menstruated after that—about the age of fourteen—and had been menstruating regularly from that time up to the time I saw her, without any improvement in speech or power of locomotion, and her friends had ceased to have any hope of her recovery. Physicians did not attend her any more at all. After I had seen her, one of these itinerant charlatans came into the community, who professed to cure all diseases by some process of legerdemain, or necromancy, or something of that sort, and all the old women, and many others, afflicted with nervous disorders, went to see him, and he sent a great many away relieved. This girl's mother went to see him and took her daughter. He said, "I can cure your daughter; there is no question about it. I am certain to cure her." A trial was made. After acquiring the girl's confidence, and making use of some words, he said: "My daughter, you can talk as well as I can. This difficulty in your speech is removed;" and unquestionably convinced the girl of the fact. "Now," said he, "I want you to repeat after me what I say. You can do so, if you make the effort. Say the word 'mother.'" The girl said "mother,"

and it was the first time she had spoken for four years; she uttered words up to about one hundred. "Now," said he, "you can talk as well as anybody. Now I must remove that difficulty about walking." He went through the same *modus operandi*, telling the girl she could walk, and she believed him. He said, "All you need do now, is to lean upon me, and take step after step, and then you can walk as well as anybody." He then took hold of the girl, and walked her across the floor, and she is walking yet for what I know, and has got quite well. In less than two weeks she was as well as ever. I am satisfied these cases can be cured if they have volition power. The reason we did not cure this girl was, we did not have her confidence.

Dr. RIEDEL. In the summer of 1836, while having charge of the hospital in a city of about sixteen thousand inhabitants, I was requested to call upon a boy who could not be kept under control any more. I wanted to take him to the hospital. He was the son of a working man. His mother had been insane, but at the time I saw her she was in possession of sufficient intellect to be left alone and manage her household, but was very generally considered to be insane. The boy was about fifteen years of age, but was not as well developed physically as others generally are at that age. He had a constitution about like that of a boy of twelve. He would have some quarrel with his mother, and then begin to scream and put everything upside down, and such conduct once went on for two days. When I went to see him, and said it was necessary to remove him to the hospital, he never spoke to me once. When in the hospital he would sit down; throw off his clothing and sometimes he would tear the beds and sheeting and strew the straw through the ward. I was obliged to put him in a room when he refused to take food. I was soon convinced that he was not insane but feigned insanity, because I satisfied myself that he was watching me. When he thought he was alone, it was reported to me that he talked quite pleasantly to others. I hoped to restore him in a short time and practiced kindness, and tried to gain his confidence, but without result. Then I proceeded to more severe treatment. At last I found how to make him speak,—by applying the electrical brush. As soon as the brush was applied, he confessed he was a bad boy; but after it was over he was the same as before. I had him under this kind of treatment for about a month. He fell away rapidly, and I had not the courage to go on. After I had tried everything, I tried nothing. I acted as though I did not care at all for him, and did not see him for several days. He

would sit up whole nights in a corner of the room naked. I had him about two months. I thought to myself if he could go on with that stubbornness voluntarily, he must ultimately go off into dementia. I learned that he had been a bad boy during his whole life, in school and out. He had been put to different trades; he was given to lying and stealing, and when he was brought to the hospital he had begun to smoke and drink. I had him under observation I think three months. At the end of that time I gave up my place and left him to my successor as a lost case.

About one year after, I accidentally went there, and my first business was to inquire about this boy. I learned that he was in the workshop. I was surprised for I had believed he would spend the greater part of his life in the lunatic asylum.

Dr. KIRKBRIDE. In regard to treatment of these nervous affections, which are, I think, generally hysterical in their character and often running into insanity, we should carefully avoid anything like a depletory course of treatment which would be likely to carry the patient into a state of dementia, and that would probably be incurable. We should rather adopt an exactly opposite course of treatment, tonics, nutritious diet, exercise in the open air, &c. My own experience is that cases of insanity in children do well. In nearly all the cases in children that I have had under my control they have recovered. I regard many of them, as Dr. Landor has said, as cases of hysteria, and, as I have already said, I think the course of treatment should never be of a depletory character.

Dr. NICHOLS. Before this discussion closes, I will say, in the reply to the inquiry made by Dr. Bartlett, that I class the mental phenomena of simple hysteria with the involuntary deliriums which are in most instances occasioned without doubt by a reflex irritation of the brain; and if a person commits a criminal act in that condition of the brain, and as a consequence of it, he is as much entitled, both as a matter of science and humanity, and as a matter of law to exemption from the penal consequences of the act, as a man affected with ordinary insanity. As some of the extraordinary protean manifestations of hysteria have been mentioned here, I will refer to the case of a young single woman, under my care at one time, affected with hysteria. She was a person of good character, fair intelligence, and of respectable connections. Owing to the hysterical fit, she would not pass her water, and I was compelled to draw it off for days together. I threatened to expose her to a young medical assistant, if she did not pass her water, and brought one into her room for that apparent purpose, always of

course, having a female assistant present, as Dr. Landor had advised. She protested against the exposure, but said she could do no better and did not. I tried other expedients to induce her to pass her water without my assistance, but all to no purpose, and I thought she would beat me. Finally, I taught a female assistant to use the catheter, and as soon as it became unnecessary for me to wait upon her she began and continued to pass her water as well as she ever did, and I had no further trouble with her on this account.

Dr. WALKER. I believe there are two or three of the brethren here who have a word to say on the subject. As it is late, I move that it be laid on the table until nine o'clock to-morrow morning, when it can be taken up for further discussion.

The motion was agreed to.

The minutes of the meeting for the day were then read and the Association adjourned to 9 A. M. Thursday.

THURSDAY, May 30.

The Association was called to order at 9 A. M., by the Vice President, Dr. Nichols.

The Association resumed the consideration of the subject under discussion at the time of adjournment last evening.

Dr. BARTLETT. At the time of adjournment last evening, I was about to make a few remarks bearing upon the question of paralysis in these cases. It was intimated in the discussion that paralysis was purely imaginary, and that the powers of locomotion existed if the will could be induced to make an effort. I once saw a case of paralysis come on suddenly, at the age of puberty, existing for three or four months, and disappearing as suddenly; in which the treatment was mostly, I may say, expectant, the case being under the care of our worthy President by consultation. In this case there was no mental disturbance whatever. The girl was the only daughter of an intelligent physician, and she was anxious every day to walk, and made an effort. She took out-door exercise in one of those perambulating carriages for lame people. She could use her hands perfectly, but not her legs. Yet her power of locomotion returned in less than a single day. Now if in this case

without mental disturbance, this paralysis existed for a length of time, I see no reason to think it may not be real paralysis in other cases where there is mental disturbance.

Dr. NICHOLS. Did you reach any conclusion in relation to the nature of the paralysis and the cause of the relief?

Dr. BARTLETT. I think it was a mere question of time. I think puberty had something to do with the cause. I do not think there was any other special existing cause. There was apparently perfect general health both before and after this attack.

Dr. GRAY. I am sorry Dr. Bartlett did not renew the question he put to Dr. Landor last evening which struck me at the time as directed to the very pith of the case related by Dr. Landor,—the question of responsibility. I should consider the case related by Dr. Landor as having gone quite beyond the bounds of simple hysteria, and having actually involved an attack of insanity.

Where we have such marked indications of aberration in a child as that case presented, in its great volubility, the obscenity, the profanity and the other indications set forth by Dr. Landor and continuing for such a length of time, so persistent, I should certainly consider the case to be one of insanity with hysteria. It is not at all unusual, but rather common, to find hysteria and insanity in the same person, and it is not at all uncommon to find a case of hysteria finally passing into insanity. So it is not uncommon to have other neuroses with insanity, as epilepsy, and the two progressing together. So, also, we find cases of neuralgia, after some time, passing into a state of insanity, or alternating with attacks of insanity.

In regard to mental manifestations alone, I should say that those showed very distinctly that the case Dr. Landor related, had passed the boundary of simple hysteria into the actual regions of insanity and consequent irresponsibility. Now, there are many such cases in which crimes are committed, such as arson, and it is a very pertinent question to members of this Association whether these cases are responsible for any such acts. Dr. Kirkbride alluded to the curability of this class of cases. I desired to ask the doctor, but it was late yesterday evening, whether in referring to these as curable cases, he alluded to those of simple hysteria in boys and girls, at the age of puberty, or to such cases as Dr. Landor related, where we have the manifestations which he gave. We have not been in the habit of receiving cases of simple hysteria into the asylum, though I have been frequently consulted in regard to this class. Where insanity has followed protracted hysteria whether in young

or old persons, my experience has been that a majority of them, especially where hereditary taint exists, are not favorable cases for recovery.

Dr. LANDOR. The cases which Dr. Kirkbride alluded to, are cases which were between twelve and fifteen years of age; cases before the development of puberty. The cases of which Dr. Gray speaks come into the asylum after that period, and are not the cases to which I intended to allude. My case was twelve years old, sent in on certificates not exactly correct, though a pure case of hysteria. Mental symptoms continued, though not consecutively, (they were varied from day to day,) and the power of motion changed, from my observation. I should object to the term paralysis. It is not that at all, but an idea that they can not walk, which they persist in, and which requires some strong moral motive or force of will in others to overcome; or they are guided by some selfish motive like the cases of Dr. Workman, where they did not use their hands, or they lie down and will not move. I do not call that a case of paralysis, nor could I agree with Dr. Gray that these are cases of insanity, because the changes are so rapid and so complete. It is a willful notion which may be partly attributed to the state of the constitution, but a notion that they have taken, the line of conduct they have adopted, and will not alter it without sufficient motives.

The treatment recommended by Dr. Kirkbride is, I think, correct, and one which will eventually bring the case out successfully. I believe they almost always recover; if not, no doubt they degenerate into insanity.

After the thorough treatment which Dr. Kirkbride recommends,—and it must be a consistent treatment,—if there is no recovery, insanity may follow. There may be patients with some forms of disorder, who have powers of constitution which enable them to survive a great deal of unskillful treatment, but they are not these hysterical children. These demand an increase of their natural powers, and that is the only treatment to which they will respond.

Dr. GRAY. Would the Doctor consider that a person knowing what is going on about him a sufficient test?

Dr. LANDOR. I am not prepared to say that. It is delicate to draw a line other than what has been drawn by experience. We undoubtedly attach meaning to terms when we use them ourselves which other men seem not to attach to the same terms when used by them. I object to the term want of motion as indicative of paral-

ysis. I object to applying the term paralysis to want of motion in these cases. I am not able strictly to define the difference which Dr. Gray wants to arrive at. I think you must define it for yourself as we define so many things in our experience. In regard to responsibility, they are hardly responsible to the law in that state at that age; at least the law would look very leniently upon persons of that age. Therefore I do not think we need trouble ourselves as to the responsibility of an act committed by a child of the age to which I refer. Whatever theoretical value it may have, I do not think it is of much practical value.

Dr. GRAY. As to loss of motion or loss of power, if I understood the remarks of D.: Landor correctly, he thought it consisted in this, that the person had adopted a deliberate line of conduct intelligently.

Dr. LANDOR. Not so strong as that. I do not say it is a deliberate intention to do a certain thing; that would certainly cut your own argument from under your feet.

Dr. GRAY. It will not be of consequence in regard to my argument. A child under twelve years of age is not fully responsible under the law. The question is whether any one, in a state of disease such as Dr. Landor described is possessed of responsibility; whether a child under that age, had the judgment and mischievous propensity and power, to mark out a line of conduct in which she deliberately determines to refuse to make any muscular efforts and to pursue the course described in that case? whether a child, in its normal state, would be able to do this for so long a time, against persuasion and remonstrance, and the general surroundings of home, and in the asylum, against the persuasions of physicians, and thus hold out, unless it was laboring under disease which did really involve its mental integrity? whether there is the power of locomotion at the time the hysterical person asserts there is not—all this is important to decide, because in many of these cases, not simply in child hysteria, but in all cases, the question of treatment is involved. If it is simply a matter of perverse will, one course of treatment may be necessary; if it is disease, another course will be required. In many cases of hysteria we know there are very marked evidences of anaesthesia. As I remarked, these persons,—not children alone, but adults,—will swallow articles which would ordinarily give them great pain, and create irritation or inflammation of the alimentary canal, and yet they do not seem to be affected. I have seen persons who have swallowed stones, pieces of crockery and

thimbles. Now there must be some anæsthetic condition to enable them to bear such things without injury. Then again we have local anæsthesia. Within the past year we have had under care a woman who had stuck into herself and swallowed a large number of needles. We took out three hundred. She protested that she had no recollection of swallowing any of them. Over eighty were taken out of one breast. These needles were retained, certainly, over four months without causing any irritation whatever. She had an attack of mania, and the first indication of any trouble was the swelling of the right breast. She had not menstruated for eighteen months. As this came on at the time menstruation returned, we supposed the swelling was simply due to sympathy between the ovaries and the mamma; but the swelling went on until the breast was almost as large as the crown of a hat, and extremely sensitive. Then, on examination, we found one sharp point, which proved to be a needle. The woman became extremely sensitive in the course of a month. The pain was so intolerable in her right arm, that she could only be kept within reasonable bounds of comfort, by putting the arms on a pillow and applying chloroform, aconite and opium. She subsequently died. She had been addicted to the use of morphia. But the important question here, is the loss of sensation. Such a loss of sensation, I say, we have in hysteria. Now, we may have certainly this other fact, that the loss of sensation appears and disappears. In the other case recited by Dr. Landor, he said there were wandering pains; that they passed from one part to another, seeming to have no direct connection. In many cases of hysteria, we have apparent loss of power of motion suddenly renewed. Is there anything more strange in the fact that the power of motion is lost and renewed, than that sensation is temporarily suspended, or that consciousness should suddenly be lost and renewed? I look upon the phenomena as precisely similar. I have no idea that apparent loss of motion in hysteria is simulation. It is a real condition, because in a vast number of instances it contributes to the great discomfort of the person, and accompanying that in all cases, with rare exceptions, there are very important changes in the condition of the skin. I have seen cases in which persons would lie for days in a profuse cold perspiration. A profuse perspiration can not be produced by the will, or be controlled by the will. So I am inclined to believe, and I do believe,—and I think that the literature of hysteria will bear it out,—that hysteria is a well-marked nervous disorder in which persons may by disease be deprived of the power of using the will

over the muscular system, just as I believe that the peculiar disease of the brain, which we call insanity, is one in which the ideas and acts are, in the main, beyond the range of the will.

Dr. LANDOR. Then you do draw a distinction between insanity and hysteria? I do not think there is any design to simulate. In the case I related, after the girl refused to walk and had remained in her bed for months, she suddenly used it. How do you account for the loss of motion?

Dr. GRAY. I go back to the point when the woman passed into that condition. She was then sick. I believe the moral influences mentioned have some influence, but if medical and hygienic means are not persisted in, the patient drops back into the same state after beginning to use motion. We effect a great deal in treatment of the actually insane by urging control. So distinguished an author as Dr. Bucknill sets forth that the insane are very largely able to control themselves under inducements, for short periods. I do make a distinction, because there is hysteria without insanity.

The hour of adjournment having arrived, the further consideration of the subject was postponed.

Dr. McDill, from the Committee on Business, reported that Mr. E. R. Curtiss, an artist of Madison, desired to take a photograph of the members in a group this afternoon, from the eastern portico of the capital. Also that the members of the Association and the ladies accompanying them were invited to take a trip around Lake Monona, on a small steamboat, provided for the purpose, this afternoon. Also, that Governor Washburn presented his compliments to the Association and requested the pleasure of the company of the gentlemen and ladies at his mansion this evening, at 8 o'clock. Also, that when the members passed out of the building they go through the Executive Chamber and call upon the Governor in a body.

The report was accepted.

On motion of Dr. Kirkbride, it was

Resolved, That when the Association adjourn it adjourn to meet at 12 M.

On motion, the Association adjourned.

After adjournment, the Association, under the conduct of Dr. McDill and the Trustees of the Wisconsin Hospital for the Insane, was taken in carriages around the city, visited the University of Wisconsin, the grounds and buildings of which were courteously explained by the President of the University.

The Association was called to order at 12 1-2 P. M. by the President.

Dr. Kirkbride presented the resolutions in regard to overcrowding hospitals for the insane, which he had been requested to prepare, which were unanimously adopted as follows:

Resolved, That this Association regards the custom of admitting a greater number of patients than the buildings can properly accommodate, which is now becoming so common in Hospitals for the Insane in nearly every section of the country, as an evil of great magnitude, productive of extraordinary dangers, subversive of the good order, perfect discipline and greatest usefulness of these institutions, and of the best interests of the insane.

Resolved, That this Association, having repeatedly affirmed its well-matured convictions of the humanity, expediency and economy of every State making ample provision for all its insane, regards it as an important means of effecting this object that these institutions should be kept in the highest state of efficiency, and the difference in condition of patients treated in them, and those kept in almshouses, jails, or even private houses, be thus most clearly demonstrated.

Resolved, That while fully recognizing the great suffering and serious loss that must result to individuals by their exclusion from hospitals when laboring under an attack of insanity, this Association fully believes that the greatest good will result to the largest number, and at the earliest day, by the adoption of the course now indicated.

Resolved, That the boards of management of the different hospitals on this continent, be urged, most earnestly, to adopt such measures as will effectually prevent more patients being admitted into their respective institutions, than, in the opinion of their superintendents, can be treated with the greatest efficiency, and without impairing the welfare of their fellow-sufferers.

Resolved, That the Secretary be instructed to furnish a copy of these resolutions to the boards of management of the different hospitals for the insane in the United States and the British Provinces.

Dr. WEBB. I could have wished that these resolutions had been more explicit; had given us, if you please, the number of square feet required for each patient, but at this stage of the proceedings I am at a loss how to effect this.

It is right and proper that we enter our protest against over-crowded institutions, but in order to make our protest effectual, we should indicate the utmost limit admissible, in an asylum, beyond which it were a crime to go.

So long as this Association simply enters its mild protest against crowding the insane together, just so long will our crowded asylums exist. We should say just how many persons it is proper to confine in a given space, and we must endeavor to have the point so impressed upon the authorities, that they would feel themselves committing a wrong to attempt any other disposition of this unfortunate class.

Dr. KIRKBRIDE. I do not differ from my friend from Ohio, in regard to this matter. For one, I should be willing to have boards of management to say that only a single patient should be put in one room, although this would press hard on some of my brethren for whom I have the greatest respect. It is well known that there are a number of hospitals, which in a large number of cases, have two patients in single rooms; which I think is hardly justifiable under any ordinary circumstances. But I do not think we can embody that in a resolution.

Dr. WORKMAN. If there is nothing before the Chair, or before the Association, at present, I should like to make an observation or two upon a subject about which I have thought a great deal, and one of a good deal of importance to us especially. I allude to the system which exists in England, under legislative authority, of bestowing compensation, for the residue of life, upon those superintendents of insane asylums, who have served a certain number of years faithfully. I believe in England, when a superintendent has served fifteen years, and is incapacitated, from physical or mental weakness, he may retire upon half allowance, and if he has served twenty-five years, he may retire with full allowance, which I think is two-thirds of his salary. In Ireland, they have a different system in operation, which, I think, is about to be rectified. There, I think, the Superintendent is required to have served forty years,—not forty years in the aggregate,—but that length of time

in the *same* institution. Dr. Stewart, I believe, has almost reached his fortieth year in the Belfast Asylum, but he served seven years in another institution previously. However, I think that will now be rectified, and the law on each side be placed on a uniform basis, as it should be. I would not urge upon this Association the adoption of this measure as a mere British precedent, unless it commends itself upon its own merits. I can not tell you how much gratification it has always been to me to meet at our annual reunions, the old faces I met in Boston seventeen years ago; but although it is gratifying to me to meet with you all, and agreeable in every way, yet I confess I miss, with regret, from year to year, too many western men, whose acquaintance I had wished to cherish. To what circumstance this may be attributable, I am not prepared to say. I think it would be well if some system, like that in the old country, be adopted, so that every superintendent might endeavor to keep in office as long as he could. In some of the States, I learn with regret, there is very little inducement for a superintendent to continue in office longer than suits his own convenience, if indeed half so long. Now in the event of decrepitude, resulting from advanced age, if he was sure of a gratuity or pension, he would struggle on, and I am sure that the community at large would see the great advantage to the insane, and to the whole public, in the prolongation of the term of service of superintendents. I think we are all conscious of the fact, that at the end of five years we are better able to attend to the condition of our patients than when we first commenced, and at the end of ten years still more so. On the down-hill of life it is well that the superintendent should give way to one of more energy.

I make these observations not with a view of offering any resolution to the Association, but that you may be drawn to ruminate over it, and have it taken up sometime hereafter with more propriety. At the same time, should the remarks I have made elicit suitable observations from other members of the Association, I think it would be well to embody our views in tangible form. I most respectfully submit this to your consideration on its own merits. I would mention that very recently a gentleman, whom many of you know very well, Dr. Hitchman and his lady, have retired with an allowance of six hundred pounds sterling per annum for life. His wife was Matron. Now they are comfortable for the remainder of life. He is not obliged to follow his profession as he would be if he were in a state of penury. This system extends in England to the whole asylum staff, down to the porter of the gate, and if you look into

the statistics, you will see numerous amounts given to old servants of thirty or forty years' service. I think Dr. Landor will be able to corroborate what I have said.

DR. LANDOR. Although called on for my sentiments, I should very much prefer to hear from gentlemen who have been in institutions on this continent. This is of importance to all of us, but it is much more important to gentlemen holding the office of Superintendent here in the United States, than it is to us in Canada. I find that men are often appointed here because they are protégés of certain political parties, and when those parties are altered they are changed, with nothing in the world against them except that they are not with the party in power. I think there is nothing more objectionable than appointing inefficient men to begin with, and when they become efficient to turn them out. I am certain there are no intelligent people on the earth, if it was put before them, who would not say that there is much to be gained by the efficiency of the individual who is going to hold office in our asylums. And it is the interest of the people themselves from the highest to the lowest, and not our own, that we are advocating, in urging the appointment of the man who shall be most efficient, and to retain him as long as he chooses to remain. The salaries appear to be inadequate in a great many instances; and then a man sometimes passes many years in one of these institutions, and when he leaves he has to recommence life in another branch of the profession, and encounters all the difficulties, almost identical with early struggles, in order to acquire a name and income under that particular branch. Knowing that they will have to start life afresh under present arrangements, I am certain that the offer of an allowance on retiring, after a number of years' faithful service, would be a strong inducement to get the best men of the profession into our department. It would cause them to look to the particular time in their pursuits when they can enjoy their leisure and use their saved income in any way they please, or convert it on the principle of insurance. Any thing of that kind would be to the advantage of all parties, the employed and the employers.

We, in Ontario, are not subject to the same dangers of removal, because we hold our places, like all public officials with us, on good behavior, and unless we commit something very bad, we are not likely to be turned out. It is understood that we do not meddle with any political feeling whatever. A man voluntarily deprives himself of his franchises when he accepts charge of any institution. Now I think the principle of pension is in your interest quite as

much as ours, because I have reached, at any rate, that period when it is not likely that I shall live for twenty years, if the pension were to be had at that time, for any services I have performed in Canada; and I am certainly not likely to receive any thing for services in England. There is no possible chance for me. My friend, Dr. Workman, might likely meet with a reward in accordance with his merits. I am sure that if this principle were established throughout the States of the Union as well as British America, it would have an excellent effect upon ourselves as well as elsewhere. I should very much like to hear this question advocated by the Association, and believe they will not be defeated by any sneers or remarks, that Superintendents are looking to their own interests, because I believe it is to the interests of the community at large to retain those who are efficient as superintendents, as long as they are thoroughly effective. I hope this question will be agitated by gentlemen of this Association, because I am sure it belongs to all our interests. It should be brought properly before the people, because when brought before them, it will win its way to success.

Dr. WORKMAN. Throughout the governmental department of the Dominion of Canada, this system is established by act of parliament. A sumptuary percentage is funded, and out of this fund the amounts are drawn. Unfortunately for myself and Dr. Landor, we have been separated from the Dominion government and connected with the Provincial one, and I am very sure it will in time be carried out in the Provincial government as well as in that of the Dominion.

Dr. NICHOLS. The duty of providing for superannuated superintendents will not be appreciated in this country until the merits of the case are much better understood than they are now, by a certain amount of agitation of the subject through a considerable period of time. While I certainly do not at this moment see how this proposition or plan can be carried into effect, I feel very much indebted to the brethren from the Dominion for having introduced the subject. As they are so much better situated in this respect than we are, their motives must have been quite disinterested. I wish to say for myself in this connection, (and in saying what I am about to, I think I shall express the sentiments of every member of the Association in the United States,) that I have always met our brethren from the Dominion with very great pleasure and profit; and I should be glad if every institution for the insane in the Dominion was always represented at our annual meetings. Although not one of the "glorious thirteen" who first

met together in Philadelphia and founded this Association, some twenty-eight years ago, I highly appreciate the honor of being one of the second thirteen whom Dr. Workman first met in Boston seventeen years ago, and I have always highly prized his valuable acquaintance.

Dr. KIRKBRIDE. While I agree most cordially with all Dr. Nichols has said, I am sure every superintendent, and every one connected with our hospitals for the insane, must recognize the great importance of offering every inducement to the best class of medical men to take charge of these institutions, and so remain in their service. We must all acknowledge that we are worth more after five years' service than during our first year. Certainly in the United States, there is about as little inducement for medical men to take charge of the insane as is possible. I speak in the interest of others, rather than in my own, because I am situated differently from many of my brethren.

It is with feelings of mortification, I am sure, that we hear of the small salaries so generally given to medical officers in hospitals, when we know they could make twice as much in other branches of the profession. As has been already said, the people of the United States suffer this state of things. If it is possible to change public opinion in this respect, it would be doing the whole community the greatest possible service. I feel very much obliged to Drs. Workman and Landor for having introduced this subject to the attention of the Association.

Dr. NICHOLS. In reference to political appointments to which Dr. Landor has referred, while I utterly condemn the principle involved in appointing superintendents on political grounds, I think that in the history of our specialty in this country, several gentlemen, who, without special experience or training, have been elevated to the superintendency of institutions for the insane, mainly, if not wholly because they were the political supporters of the appointing power, have accepted the positions with the sincere purpose of doing the best they could for their respective institutions, and for the insane who should come under their charge, and have in time become deeply interested in their work, and as they acquired experience and knowledge, made excellent superintendents. I suppose that in some of the Southern States, since the late war, several appointments have necessarily been made and accepted, if accepted at all, on political grounds. Under the circumstances, I have no objections to urge against these appointments, especially as the most of them appear to be remarkably good ones; but it is

my strong conviction, a conviction that has grown stronger and stronger, with experience and observation, that when a gentleman has accepted an appointment to take charge of an institution for the insane, he should, from that moment, give up politics. Active political partisanship not only jeopardizes a superintendent's position, but indirectly does great injury to the insane under his care. A superintendent who gives his mind and time to a subject so foreign to his proper pursuit as politics, must neglect not only the daily care of his patients, but those studies which fit him for actual and progressive skill and efficiency in the discharge of his multifarious and responsible duties. He also renders it inevitable that the moment the political wheel turns over,—perhaps just when his experience has qualified him for a higher degree of usefulness than he has hitherto been capable of,—he will be put out to give place to another new man, whose patients will for a time be more or less the victims of his inexperience.

I move that the subject brought to the attention of the Association by Dr. Workman, be referred to a committee of three, to be appointed by the chair, and to report at the next meeting of this body.

If this resolution is agreed to, I do not wish the President to follow the parliamentary usage of placing the mover's name at the head of the committee. It will be obvious to the Chairman that another name should stand in that place. If the committee should not be prepared to report at the next annual meeting, it can say so, and be continued, but I shall be glad if it is able to make a report of practical usefulness.

The motion of Dr. Nichols was agreed to, and the President appointed as the committee, Drs. Workman, Nichols and Kirkbride.

Dr. Kirkbride, from the Committee on the time and place of the next meeting, reported in favor of Baltimore, Maryland, as the place, and the fourth Tuesday of May, 1873, as the time of the next annual meeting.

On motion, the report was adopted.

On motion, the Association adjourned to meet at 3 P. M.

THURSDAY AFTERNOON.

After a photograph of the members had been taken by an artist of Madison, the Association was called to order at 3 1-2 P. M. by the President.

The PRESIDENT. The Association will listen to remarks by Dr. Ranney, in regard to some recent legislation in his State.

Dr. RANNEY. Mr. President, some recent legislation in Iowa in regard to the hospitals for the insane in that State, seems to be a matter of a good deal of importance and interest to the members of this Association; and I will, on account of the extraordinary character of the Legislature, and the threat that has been made by the person who was chiefly instrumental in procuring it, that similar efforts will be extended to the adjacent, and perhaps all the States, give an account of what has been done. A bill was introduced in the Iowa Legislature early in the session last winter, entitled, "An act to protect the insane." I regret that I have not the act to read to you as it was my intention to do; through some mishap I have no copy here, but its main features are as follows:

A visiting committee is to be appointed by the Governor of the State with extraordinary powers,—higher powers than those possessed or those granted to the Board of Trustees of the hospital. This committee has been appointed by the Governor, and has the power to send for persons and papers, and examine witnesses on oath; to inquire into matters of admission and retention of patients, and their treatment in hospitals by the officers and attendants, and correct any abuse found to exist. It consists of a lawyer, a physician and a lady of the State. They have power to discharge any person employed in the institution in their opinion meriting discharge; and for non-compliance with, or violating any provision of the act, imprisonment not exceeding three years, or a fine not exceeding one thousand dollars, or both imprisonment and fine may be imposed upon conviction. This committee is to visit the hospital monthly or oftener, and they are obliged by the act to attend immediately to the requests or charges of any patient who complains of improper treatment in the hospital. In the language of the bill, patients are allowed to write when, what and to whom they please, and the superintendent of the hospital, or any person employed, is forbidden under the penalties of the act to open these letters or retain them. All letters may be sent, not directly to their friends, but to this committee, who have the power

to read them and judge of the propriety of sending them to their destination.

The names of this committee and their post-office address must be posted up in every ward of the hospital, and the patients may write as often as they choose, though it seems probable one clause in the bill gives the superintendent the right to restrict writing to once a week.

When the bill was introduced into the Legislature, it was referred to the Committee on Charitable Institutions, and I prepared a somewhat lengthy argument against its provisions, which I had the privilege of reading to the committee; but soon after I left the capitol this person, Mrs. Packard, the author of the bill, (known by name, if not personally to all of you,) appeared there and succeeded in making such an influence upon each individual member in both houses that the bill passed the House of Representatives without a dissenting voice, I believe, and with only two or three dissenting voices in the Senate.

I have learned since that her efforts to procure the passage of the bill were indefatigable. She made it her whole business and succeeded in a most remarkable manner in impressing upon the minds of the members of the Legislature the great importance, as it seemed to her, and the necessity for some such legislation for the abuses which she alleged existed, perhaps not only in Iowa, but in all similar institutions throughout the country.

This committee have the power to prohibit patients writing, if they see fit, but the act takes away all power of the superintendent as to his discretion in the matter. The enactment was worded so as to take effect on and after its passage.

Immediately on ascertaining the character of the law, which was three or four weeks ago, I began to carry its provisions into effect, and the result within this short period has been that which any of you, gentlemen, might suppose. Patients at once began to write very freely, and before I left home four patients had been removed from the institution, who were there for curative treatment, and who would undoubtedly have got well if they had been allowed to remain. They were removed, I believe, wholly on account of their misrepresentations of their situation and surroundings. It is quite apparent, not only to myself but to all concerned, that this operation of the law affects very decidedly the proper relation between the patients and the superior officers of the institution, and the attendants as well. A feeling of independence of all restraining influences, that are so desirable in maintaining a proper

police in an institution of the kind, was apparent at once. It was so marked that nobody could mistake its effect.

We have not yet had a visit from this committee that has been appointed, but I expect the visit daily. What position they will take in regard to the management of affairs, I can not tell until they have a meeting.

This legislation was brought about by the grossest misrepresentations of this person, Mrs. Packard, if the information which has reached me in regard to the matter is correct, and I presume it is. This law must remain in force for at least two years, because our Legislature meets biennially. At the end of that time it may have caused so much injury to the unfortunate inmates of our hospitals, perhaps, as to secure its repeal.

Dr. WORKMAN. Was not this woman suspected of insanity herself?

Dr. RANNEY. This lady was a patient under Dr. McFarland in the hospital at Jacksonville, Illinois, for a period of two or three years, and discharged not recovered, and I have been told she was once in the hospital at Worcester.

Dr. WORKMAN. Then this disease is contagious in this country?

Dr. LANDOR. I think we ought to pass a resolution of condolence to Superintendent Ranney.

Dr. WORKMAN. How many insane hospitals have you in Iowa?

Dr. RANNEY. Only one in operation. A second one is being constructed in the northern part of the State, and will be open for the reception of patients within a year from this time.

Dr. WORKMAN. I suppose the members of the Legislature will fill it altogether?

Dr. RANNEY. This Mrs. Packard is the same person who caused the investigation into the affairs of the hospital in Illinois, which broke like a storm over Dr. McFarland's head, and resulted ultimately, I think, in his retirement.

Dr. WALKER. Has this committee power to discharge?

Dr. RANNEY. The committee have power to discharge employés guilty of conduct meriting discharge. I fear another result of the operation of this law, and that is, that I shall be unable to find attendants who are willing to undertake service with such penalties as they feel may possibly be hanging over them, as the consequence of the misrepresentations of dissatisfied, irritable and perverse patients with which you are so familiar. As soon as the law was passed and its provisions understood, eight of my most experienced and valuable attendants gave me notice that they should leave at

once, feeling that they would not be subjected to such an annoyance as they felt might arise, and such penalties as may be attached to any action that this committee may take, based upon misrepresentations which patients are so liable to make.

Dr. LANDOR. Has the committee met and taken any action?

Dr. RANNEY. They have not yet had a meeting. My first thought was to present this matter and ask the Association to pass some resolutions I would offer in regard to the impropriety of this legislation, or the appointment of a committee to report to this body, or prepare an address to be sent generally to the State Legislatures with regard to what legislation ought to be had in relation to institutions for the insane, and what legislation ought not to be had. Also how far the Legislature ought to go in regard to those institutions beyond the powers that they delegate ordinarily to Boards of Trustees.

My second thought is to await results, and then, possibly, this Association ought to take some action in the matter of the welfare of the class whose interests we have in our keeping.

Dr. KIRKBRIDE. Do you suppose any action this Association could possibly take would have the slightest influence on a legislature that could be induced by such a person to pass such an act? It seems to me that it would be really beneath the dignity of this Association to interfere in such a matter. It seems to me if such a law as that does not convince the Legislature of that State within two years, of the great evil it will produce, nothing we could say would possibly do it. I would ask the doctor whether the rigid enforcement of the law, while it is the law, would not be better than any other action that could be taken?

Dr. RANNEY. I agree with Dr. Kirkbride; while any action this Association might take in the matter may not have any decided effect now, the time may come for the Association as a body to speak in condemnation of such legislation.

Feeling that it would be the best to carry out the law fully in all its provisions, I began to do so just as soon as I knew the act had passed, so far as I am concerned, and consequently began, before the committee had a meeting, to allow the patients to write when and what and to whom they pleased, in accordance with the terms of the law, with such results, in the short time since the passage of the law, as I have mentioned.

Dr. WALKER. Of whom does this committee consist by law?

Dr. RANNEY. The law leaves the appointment with the Governor, and he has appointed a lawyer, a physician, and a lady.

The lady was appointed under the impression, I have been told, that there were some complaints the female patients might wish to make with regard to their treatment, that they would make more freely to a woman than to a man.

Dr. SHEW. There can be no doubt that the insane of the State of Iowa will be the greatest sufferers from the enforcement of this law, but the quickest way to have an obnoxious enactment repealed, is to thoroughly enforce it. If we hear that Dr. Ranney is incarcerated in prison, or his attendants and assistants, as the result of this law, we must look upon them as martyrs in a good cause.

But, seriously, the most unpleasant aspect is that within four or five months Dr. Ranney will have no attendants, and I think, at such a time, he ought to publish a full statement of the case in such a way that a special session of the Legislature would be called to repeal such an obnoxious law.

Dr. RANNEY. I do not suppose that it will leave us without attendants or some kind of service, but it appears that the better class of attendants, whom we most prize and need, will not take positions in the institutions. That is the result I anticipate as foreshadowed by the action already taken by some employés, and which we may naturally look for.

Dr. STEVENS. I do not think we can be justified in acting in a matter of this importance without due and very careful consideration. I have had occasion to observe these matters and to know something of the disposition of legislative bodies towards our specialty, especially those of Missouri and Illinois, and we now have in this action of the Legislature of Iowa, additional evidence of an unkind sentiment. I am fully convinced that, in the West, this sentiment is of such a character that any evil designing person can turn it against us to our discomfiture or injury, no matter what resolutions we adopt or what action we may take. The influence of that woman and those operating with her is certainly surprising, and we are yet to see in other States the same or similar enactments. From such facts and reasoning, then, I say that the subject should be treated with extreme caution in order to counteract the mischief this vitiated sentiment is producing. The truth is, the Legislatures, as well as the people, appear inclined to believe everything against us and nothing in our favor.

Dr. WORTHINGTON. How is the act in relation to fines?

Dr. RANNEY. There is a provision for fines not exceeding one thousand dollars.

Dr. WORTHINGTON. I would refuse to send letters and appeal to the courts for protection.

Dr. LANDOR. Do they take testimony of the insane?

Dr. RANNEY. They are to take the testimony of the insane for what it is worth.

Dr. WALKER. Was this presented in its true light?

Dr. RANNEY. Yes, sir; a gentleman of the highest culture and influence in the State was present at the time and seconded the argument that I made to the legislative committee against this bill. I had previously read it to the Board of Trustees, at one of their meetings, and they concurred in all that I had to say.

Dr. WORKMAN. I am very much inclined to retrace my steps in relation to some of these matters. I read a paper in Toronto in regard to demonomania. I was assured that the public mind of New England was against it; but I believe it to be in existence here and I can not advise a remedy more effectual than a revival of the witch laws of Massachusetts.

Dr. RANNEY. There were three or four physicians in the Committee on Charitable Institutions, and I think that they, individually, were in favor of this law; and it is my impression, from my experience not only in Iowa but elsewhere, that we are as little sustained by the profession at large as any class of the community.

Dr. BARTLETT. Can not the Governor be relied on?

Dr. RANNEY. The law was approved by the Governor in the usual way and he has nothing to do but to act in accordance with the provisions of the act.

Dr. NICHOLS. The majority was so large that had the Governor vetoed it, it would have been passed over his head.

Dr. RANNEY. Probably it would. There were only a few dissenting votes in the Senate, and the vote was unanimous, I think, in the House. We have no Board of State Charities in Iowa. Each charitable institution has a board appointed for it.

The PRESIDENT. Was your own Board heartily opposed to it?

Dr. RANNEY. They were unanimously in favor of the position I took against the bill.

Dr. LANDOR. Did the Governor appoint such persons as will be likely to carry the law into force?

Dr. RANNEY. One is entirely unknown to me; the other is a lawyer, an ex-governor of the State, and an ex-judge of the Supreme Court. He is regarded as a gentleman of high character, but what his views are, in regard to his duties on this committee, I have not the means of knowing.

Dr. KIRKBRIDE. Is the lady reliable?

Dr. RANNEY. I do not know personally. She is a lady of high character and influence in the State at large, a lady of culture and refinement, I believe. But what course will be pursued by this committee, I have no means of determining.

Dr. WALKER. Has this lady on the committee had any communication with Mrs. Packard?

Dr. RANNEY. I do not know of my own knowledge; but I think there are but few persons in the more populous portions of the State who have not had communication with her. She has been industriously circulating her publications, and I presume there are very few persons in the State who have no information of them.

Dr. WALKER. Has that lady ever been insane?

Dr. RANNEY. I think not, sir.

Dr. WORKMAN. Is she a woman's rights woman? (Laughter.)

(The proceedings were here momentarily interrupted by the unexpected entrance of a number of the wives and daughters of the members of the Association, who were invited to seats. The business of the Association was then proceeded with as follows:)

Dr. RANNEY. I do not know.

Dr. WORKMAN. Is it not your opinion that this evil will cure itself within two years?

Dr. RANNEY. Of course I look for the best results. While this law is upon the statute book, I will feel it to be my duty, and will try to carry it out to the letter.

Dr. WORKMAN. I have often thought it better to have patients send letters to their friends, and pepper them pretty well. I have known their friends to express astonishment that I allowed such letters to be sent at all. I know it is not always desirable for patients to have letters go without restraint, but when I know there are patients who manifest a propensity to tell lies in order to get away from the hospital, I think I can not do better than to let the letters go. I do not know of any better way to reach the medium understanding of the friends of a considerable portion.

Dr. WALKER. Would you do that in case of a curable patient on the very point of recovery?

Dr. WORKMAN. I do not think a patient on the very point of recovery would write a lying letter.

Dr. WALKER. I have seen them do it on the point of recovery, or when they began to mend.

Dr. WORKMAN. If they do, I think it is better for them to be away on the point of recovery.

Dr. WALKER. I think not. I think it ought to be done without regard to whether it costs us trouble or not.

Dr. WORKMAN. If it is done upon remonstrance, I think we are free from responsibility.

Dr. WALKER. We do not hold that the patient is responsible until recovered.

Dr. WORKMAN. I mean the friends. The friends will believe *you*, I think, sooner than the *patient*, if they have good sense.

Dr. SHEW. I have always made it a rule to send home as many letters as possible. Recently I permitted a letter to pass from the patient to the mother. The patient was a young lady. The mother came to the hospital very indignant, and was about to take her daughter home. I asked her if she believed the statements made by the daughter, and took her to her room, and had her converse with the matron very fully in reference to her daughter's diet, &c. She said that her daughter had always been very truthful, and she had no reason to doubt her word. She thought from her daughter's letter that the hospital was a horrible place. I went to the office and opened the record book in which we enter the history of patients, their peculiarities while in the hospital, and read to the mother the statements of the daughter when she entered the institution; "that her mother had been giving her arsenic for several months, resulting in the breaking out of pimples all over her; that they had kept her on stewed cats and fried rats, and she could not recover." These facts helped to modify the mother's remarks. The daughter has since recovered sufficiently to be at home, and bears the best testimony in regard to her treatment in the hospital, and she is one of the best friends of the institution at the present time. She now regrets exceedingly what she said during her insanity.

Dr. HUGHES. Does this law make the superintendent of the hospital responsible for those acts done by an attendant, and of which he is not cognizant? And does it make the trustees responsible in such cases?

Dr. RANNEY. Not at all. Only those who violate the provisions of the law will suffer its penalties. It is apparently intended to apply only to an attendant, or any individual whom the patient may accuse of having maltreated him, and of whom it may be proved.

With regard to the application of the provisions of the bill to the officers of the hospitals, aside of course from the penalties for any personal abuse they may inflict upon patients under care, it would seem to apply more particularly to the illegality of the commitment, or improper detention of persons in the hospitals. It is really a standing declaration by the Legislature that patients are improperly admitted and improperly detained in the hospital, persons who are not insane; and improperly treated by officers and attendants, and the act in question is apparently intended to prevent any such abuses which it supposes to exist.

With regard to patients writing; if allowed to do so without restriction, it seems to me they may do themselves as much harm during the period of convalescence as during any time they may be in the hospital. They have got better, and are perhaps aware of the disordered state of mind they have passed through; they are aware of the changes that have come over them, and they then frequently assert that they are well long before we know such to be the case, and while we see disordered manifestations of the intellect, that have not yet fully passed away. In such a state of mind, if they have the opportunity, they may write in such a way as utterly to deceive their friends long before health is really established, and before that condition is reached which will place them beyond the danger of relapse, unless a good system of treatment is continued. In that state of mind if they are allowed to write when, what and to whom they please, it will insure the premature removal and permanent injury of a great many who would otherwise get well. At such times I believe the superintendent should be allowed to exercise all needful discretion as to what his patients shall write or when they shall write. I have been in the habit of allowing patients frequent opportunities for writing, but exercised my judgment as to what they should write. If improper letters were written, I have requested them to write again, and perhaps again until I could approve of what they wrote, I have thus almost always succeeded in retaining my patients until the danger from immediate relapse had nearly or quite passed away. The effect of the law, thus far, has obviously been injurious. Three or four patients that have been removed prematurely through its operation, were in a state of convalescence, and only a few weeks' time would have been required to perfect their recovery. Having been prematurely removed, I feel confident there is much danger their disorder will pass into the chronic stage, and complete recovery be prevented.

Dr. NICHOLS. Lest my silence should be interpreted as indifference on my part to the great trial that has come to our brother, (Dr. Ranney,) and to the calamity that has come to the insane of Iowa, I wish to express my sincere sympathy with the Doctor, and pity for the insane of his State. As Dr. Kirkbride has suggested, I think I should promote the literal and exact enforcement of the law. As the refusal to admit patients to already over-crowded institutions is thought to be the course most likely to induce legislatures to provide additional hospital accommodations, though the refusal to admit must bear hard on some individuals; so, though convalescents and others may suffer deeply from the strict and uniform execution of this law, such execution is likely in the end to promote the welfare of the insane of the State by sooner and more certainly inducing the repeal of the statute.

Understanding that the ladies who have done us the great honor of paying us a visit, have sat as long as their engagements will permit, I hope the proceedings of the Association will be suspended during the few moments they will occupy in taking their departure from the room. I think myself safe in asking them to accept an expression of our obligations to them for their call, which has been as agreeable to us as it was unexpected.
(Laughter.)

The PRESIDENT. The Chair understands that the ladies who have honored us with their presence this afternoon, are all engaged to take a sail on Lake Monona. With rather unwonted humility on their part, they have come to ask our permission! This is freely and unanimously granted.

The Chair would suggest, from our deep interest in the matter, that a committee be appointed to wait upon them to the steamboat, and also to see that no harm happens to this, the better part of the Association.

Dr. KIRKBRIDE. I would suggest that this committee be taken from the original thirteen. (Laughter.)

Notwithstanding the suggestion of the Ex-President, the President selected the committee from the junior members, appointing Drs. Hughes and Worthington.

On motion of Dr. Kirkbride, the Association then adjourned to 9 A. M., Friday.

The members of the Association, immediately after adjournment, resolved themselves into a committee of

the whole, and joined the ladies. They enjoyed an afternoon excursion on Lake Monona, in the steamboat Scutanowbequon, and on returning spent the evening by invitation at the hospitable residence of Gov. Washburn.

FRIDAY, May 31.

The Association was called to order at 9 A. M., by the President.

The minutes of the proceedings of yesterday were read and approved.

On motion of Dr. Van Deusen, it was

Resolved, That the Secretary be requested to convey to Dr Steiner, formerly Medical Superintendent of the Texas Hospital for the Insane, now a resident of the city of Madison, an expression of the sympathy of the Association, in the severe illness from which he has so long suffered.

Dr. Van Deusen presented to the Association a new arrangement of iron pipe, by which that part where the thread is cut is made much thicker than usual.

Dr. Gray, from the Committee on Resolutions, made the following report, which was unanimously adopted:

The Association of Medical Superintendents of American Institutions for the Insane, in closing this, its twenty-sixth annual convention, being deeply impressed by the courteous hospitality of the citizens of Madison, and desiring to give expression to its grateful appreciation of the kind attentions of those who have so largely contributed to the comfort and entertainment of its members, and the attainment of the objects of the meeting,

Resolve, That to his Excellency, Hon. C. C. Washburn, Governor of the State of Wisconsin we are greatly indebted, not only for the cordial invitation to his home and its generous hospitalities, but also for his courtesy in escorting, to the many places of interest about the city, the ladies,—the wives and friends of the members of the Association.

Resolved, That to the Trustees and officers of the Wisconsin Hospital for the Insane, this Association is especially indebted for

the opportunity of visiting and making a thorough inspection of the Institution, and the enjoyment of its cordial and very munificent hospitality.

The Association would also express its high commendation of the site selected; one eminently healthful, of varied and extensive view and great natural beauty, and of the fitness of the Hospital buildings to the purpose for which it was established. The condition of the Institution fully attests to the wisdom and discretion of its management, and the skill and ability of its medical Superintendent, Dr. A. S. McDill. While congratulating the citizens of Wisconsin upon the excellence of this Hospital, the Association would very earnestly commend the early completion of the present building according to the original plan; and also the Institution at Oshkosh, and the extension of the same liberal and enlightened support to both institutions which has been given to the present hospital. To the Trustees of the Hospital our thanks are also due for a delightful steamboat excursion on Lake Monona.

Resolved, That our thanks are hereby tendered to Major Mere-deth, Superintendent of Public Property, for his consideration in placing at the disposal of the Association for its several sessions, the commodious rooms of the Wisconsin State Agricultural Society.

Resolved, That we present our thanks to the Regents and Faculty of the University of Wisconsin, for the pleasure of visiting and inspecting that admirably arranged Institution, and to its President, I. H. Twombly, D. D., for the courtesy of a reception at his residence.

Resolved, That we tender our thanks to the officers of the State Historical Society, for their courteous attention in inviting the members of the Association to visit their rooms at any time during the session.

Resolved, That our thanks are also tendered to R. W. Burton, Esq., Superintendent of the Wisconsin Soldiers' Orphans' Home, for an invitation to visit that Institution, which, however, the business of the Association did not permit us to accomplish.

Resolvd, That we tender our thanks to O. Beardsley, Esq., of the Chicago and Northwestern Railroad, for a special train placed at the disposal of the Association, for conveying its members and invited guests from East Madison to the Hospital for the Insane, and returning therefrom; also, to Mark H. Irish, of the Park Hotel, through whose kind and constant attention to our personal comforts our session in Madison has been made exceedingly pleasant.

Dr. McDill, on behalf of the Trustees and officers of the Wisconsin Hospital, expressed his high appreciation of the honor done them and the city, in holding the present meeting here, which had permitted them and many of our citizens to form pleasant acquaintances with gentlemen from all parts of the country, which they would not have been able to do in any other way, and all would remember this meeting of the Association as a pleasant episode.

Dr. Butler, (the President,) expressed his gratification; if the Association had left any pleasant memories behind. They would take away delightful recollections of the courtesies of the inhabitants, and the many charms they find in this Queen City of the West; and the gathering just closing would always be remembered as one of their most pleasant.

On motion of Dr. Shew, it was

Resolved, That the thanks of the Association are due, and are hereby tendered to the reporters and editors of the daily papers of the city of Madison, for the fidelity and accuracy of their reports, and their courteous attention.

A motion was made to adjourn. Before putting the motion, the President, Dr. Butler, remarked :

This motion for adjournment brings us to the end of the twenty-sixth meeting of this Association, and of the twenty-eighth year of its existence. In its early years fears were entertained, that, when its founders had passed away, the interest felt in the Association would die with them. It was gravely questioned whether it would be possible to keep up a full attendance at annual meetings; and the expediency, if not the necessity, of holding only biennial meetings was strongly urged by several members. The result has shown that these doubts were groundless, and that the interest and usefulness of the Association have increased year by year. This has been one of the largest, as well as most agreeable and useful of our meetings. It has been characterized by close attention, interesting discussions and unvarying courtesy, with sincere and practical devotion to the great object before us. The

attendance has been prompt and large, from the opening session at ten o'clock on Tuesday, to this hour. Several of the members, like myself, have traveled over a thousand miles to attend the meeting. There has rarely been a more united and harmonious feeling among the members.

We have instructed and strengthened one another by free discussions and mutual counsels. During the few years that the Association has been in operation, its united efforts have educated the public mind up to a higher standard, both in regard to the prevention and treatment of insanity, and to the necessity of the erection and suitable organization of new lunatic hospitals. Thus has this department of medical science been largely advanced by your action, while thousands of households in our land are bound in gratitude to you, that, by these means, so many of their relatives and friends have been restored to physical health and sanity.

The position of Superintendent and Physician of an insane hospital is not one of ease or pleasure, but of grave and ceaseless responsibility. It demands earnest, constant and careful study, faithful and unwearied labor, and the most patient endurance. The Superintendent, (if he be made of the right sort of stuff,) must feel as if here in the advance of the great army of humanity, that he is like an officer on the field of battle who holds with his battery the key of the position, and knows if he falters in duty or courage, if he retreats or allows his guns to be taken, the whole battle will be lost. Thus, if the Superintendent fails in duty or manhood, his hospital will be crippled, if not destroyed. The position is full of honor, and ultimately great reward. The contest against ignorance, prejudice and parsimony, can not be maintained without great effort and sacrifice; for no great good in life is ever attained without a corresponding struggle. The reward may not come at once, it may come after you have passed away, but it is none the less the reward that you have earned. Results are rarely seen at once. Those who labor for them must be willing to wait, hopefully, earnestly and patiently, remembering that all things come round to him who waits. Oftentimes you will find, like that grand architect of old, who laboring in sadness, "builded better than he knew," that you will have attained results better than you ever dared to anticipate. In bidding you good bye, with my best wishes for your future success and deserved rewards, let me pray you never to forget that the end, and the only end you should seek, as surely you are now seeking, is the best means for the prevention, the cure or the alleviation of a disease which is one of the gravest

calamities that can befall any one of the human race. When you consider the extent and activity of the predisposing and exciting causes of insanity, their fearful prevalence and the terrible results which follow the failure to remedy them, surely I do not unreasonably magnify your office, when I claim that you are fighting one of the grandest of the many "Battles of Life."

In all your efforts, may God help you to come off victorious.

On motion, it was

Resolved, That the Secretary be requested to furnish at each meeting of the Association, a list of the members with the legal titles of the hospital and the post-office address; and that the members be requested to exchange photographs with autographs attached.

A very pleasant conversation among the members followed, and, on motion, the Association adjourned to meet in Baltimore, Maryland, on the last Tuesday of May, 1873.

JOHN CURWEN, Secretary.

THOUGHTS ON THE CAUSATION OF INSANITY.*

The human body, for the purposes of life, is a unit of intimately associated organs. Each of its constituent elements contributes its share, and so co-operates by its activity to maintain that complex condition of our being, known as organic or physiological existence. For the normal working of the organism, it is essential that its fundamental elements should be sound and rythmical in action. Nevertheless, each individual organ has a life of its own ; not so conspicuous in man as in the lower animals, to which is due the independence of deranged action, or disease, displayed in single organs, without at the same time any visible impairment of the functions of the whole body. Furthermore, each organ is endowed with a certain amount of surplusage, or ability to perform and bear more than is habitually required, and this reserve force, or provision for strain, differs in individuals. To the activity proper to each organ are due the peculiar characteristics of its function, and of the phenomena of its decay or death.

One element may fail or degenerate more readily than another, and reacting on the whole local structure, cause this in its turn, and in a physical way, to originate, in the first place, a local disease, and in the second, a consecutive general disease. The tolerance or reaction to such morbid disorders on the part of the organism, as a unit, differs according to the structural elements

* Read before the New York State Medical Society at its Annual Meeting, February, 1872, and also before the Association of Medical Superintendents of American Institutions for the Insane, at its Annual Meeting held in Madison, Wis., June, 1872.

involved. Hence, some organs are denominated vital, because their lesion is more important as being capable of originating more or less profound general disturbance or even death. But even the structure of these vital organs may occasionally be deeply involved by disease or accident without determining any material disturbance in the natural operations of the body.

Necrobiosis, a term happily introduced by Virchow, may and does often take place in the brain to an extensive degree without any apparent sign of its existence in the mentality of the individual. Thus, through the same unknown process, the lungs, kidneys, &c., may undergo considerable degeneracy of their structure without producing any conspicuous constitutional disturbance. Let it be understood, however, that in noticing this well-acknowledged fact, we do not pretend to assert that under such circumstances life is normally carried on, for so far, the fact only proves that we fail to appreciate the abnormal phenomena attending the organic changes here in question.

In the celebrated case of Phineas Gage, reported by Dr. Henry I. Bigelow, (*American Journal Medical Sciences*, July, 1856,) the patient, by the premature discharge of a blast, had a *tamping-iron*, with which he was ramming down the powder, driven through the head from below upwards. The bar, three and a half feet long, and weighing thirteen pounds, entered at the ramus of the left jaw, passing under the zygomatic arch, behind the eye, through the anterior part of the left hemisphere, and across the corpus callosum and the margin of the right hemisphere, involving the loss of the whole central part of the left anterior lobe, together with extensive laceration of the spheroidal, or middle lobe, the right central lobe, the falx and the longitudinal sinus. The patient not only made a perfect recovery in a physical sense, but by every known test that was applied either subjectively or objectively to his mind, failed to exhibit the slightest impairment of any intellectual faculty. Prof. John Ordronaux, who saw Gage shortly after the accident and before he was under the care of Dr. Bigelow, says the brain

could be perceived pulsating in very nearly the original place of the anterior fontanelle, and though he had lost so much brain substance, and a compress of tea-lead was kept upon the wound to prevent the extrusion of the brain, he had lost nothing of mental power or sagacity, and was entirely clear in all his mental processes.*

Abscess of the brain may exist, or portions of it may be carried away by gunshot, or other injuries, and yet no perceptible difference be observed in the mentality of the individual. Portions of the lungs may be destroyed and what remains still be able to carry on the physiological processes of the organ so as to meet all the demands upon it, in its connection with the whole body. Indeed, it may be said that few persons are in uniformly sound health. In a really sound organism each structural element is not only perfect, but in harmonious correspondence with the organic operations of every other part.

The ordinary condition of mankind is that of variability in the anatomical structure and physiological power of parts. "Infirmity, or instability of element, of some parts," (to use the phrase of Prof. Maudsley,) "is also apt to exist as a congenital state."

As a predisposing or inciting cause of disease, constitutional defects, or instability of element, stand pre-eminent. If we see a narrow flat chest in a large organism, and find that this individual is subject to a cough on slight atmospheric changes, we are apt to inquire whether his ancestors have died of consumption, and find the inquiry usually answered in the affirmative. In this instance we have natural infirmity

*See also case of young Galli; reported by Dr. Edwin Hutchinson, of Utica, in the AMERICAN JOURNAL OF INSANITY, volume 25, page 256. A case of compound fracture of the skull, at the anterior portion of the right parietal bone, loss of brain substance at the time, and subsequently by abscess and recovery.

and instability of lung element, and they lead us to recognize a tubercular diathesis, and prognosticate consumption under unfavorable circumstances of life. And as we know, the poorly-housed and poorly-fed, of this class of people, almost always die prematurely of tubercular disease.*

The doctrine of heredity of the nervous tissue rests upon the same foundation of "natural infirmity and instability of nerve element." In regard to insanity, this question of heredity is of the highest possible import. A distinguished writer (Maudsley) says, "the insane neurosis which the child inherits in consequence of its parent's insanity, is as surely a defect of physical nature as is the epileptic neurosis to which it is so closely allied." This author also says in regard to hereditary neurosis: "Past all question it is the most important element in the causation of insanity."

He further says: "We have not to deal with disease of a metaphysical entity, which the method of inductive inquiry can not reach, nor the resources of the medical art touch, but with disease of the nervous system, disclosing itself by physical and mental symptoms." * * * * "Mental disorders are neither more nor less than nervous disorders in which the mental symptoms predominate; and their entire separation from other nervous diseases has been a sad hindrance to progress." "It is quite true that when we have referred all the cases of insanity that we can to bodily causes, and grouped them according to their characteristic bodily and mental features, there will remain cases which we can not refer to any recognizable bodily cause or connect

* The pulmonary manifestations of the diathesis are here obvious; not so, however, if they shall have mainly involved the nervous system; the mental state, the propensities and tendencies, the cerebral premonitions which herald a threatening outbreak of insanity in individuals tainted with a diathesis, whether inherited or acquired, at any age of life, is a subject still open for research, and a rich mine of evidence for the physical causation of insanity.

with any bodily disease, and which we must be content to describe as *idiopathic*. The explanation of these cases we shall probably discover ultimately in the influence of the hereditary neurosis, and in the peculiarities of individual temperament."

In accepting this explanation, we must, while admitting the probability of hereditary neurosis, not lose sight of the fact that insanity itself is a special nervous disorder, and may in individual cases originate in some still unknown morbid process in the nerve tissue.

It is further evident, that we are every day discovering structural degenerations of brain tissue, which throw more and more light on causation, and constantly narrow down the class of so-called *idiopathic* cases, the etiological history of which gives little force to, if it does not contradict, the idea of an *idiopathic* origin in any case. The researches of J. Lockhart Clark into the pathology of tetanus, should make us guarded in negative conclusions, and in the use of such vague terms as *idiopathic* in speaking of diseases.

Prof. Maudsley, speaking on the subject of physical causation uses this emphatic language: "I am tempted sometimes to think that no person goes mad, save from palpable physical causes, who does not show more or less plainly, by his gait, manner, gestures, habits of thought, feeling and action that he is predestined to go mad." Again, he says in support of this physical origin of insanity: "It can not be in the normal order of events that a healthy organism should be unable to bear ordinary mental trials; much less a natural physiological function such as the evolution of puberty, the puerperal state, or the climacteric change."

Heredity is a condition which originates morbid processes of the most manifest physical nature. While I do not entertain as decided an opinion as Dr. Maudsley in regard to the extent of the insane neurosis, (a

term which he uses instead of the old expression hereditary predisposition,) I fully believe, what he is "tempted sometimes to think," that insanity occurs only as the result of physical causation—that a necessary antecedent to madness is a disordered physical state of the brain—that it never occurs in a person of sound brain. In 1868, two years before the publication of Maudsley's work, from which I quote, in an annual address before the State Medical Society, I said: "Insanity is now generally recognized as a bodily disease, a disorder of the brain, and must take its place in the category of the neuroses, and is in fact the highest expression of this class."

My predecessor, Dr. Brigham, while declaring that it was his opinion that moral causes predominated in the development of insanity, nevertheless qualified this declaration in the following words: "The phrase 'derangement of mind' conveys an erroneous idea, for such derangement is only a symptom of disease in the head, and is not the primary affection. It is true that moral and mental causes may produce insanity, but they produce it by first occasioning either functional or organic disease of the brain. On examining the heads of those who die insane, some disease of the brain or its appendages is generally found." He argues "that the brain, considered as a whole, is the instrument by which the mind operates," and after referring to the "belief in the dependence of the mind upon a sound state of the body as forced upon us by almost daily occurrences;" and giving some illustrations, he adds: "Insanity furnishes farther evidence that the brain is the organ by which the mind acts, for this is not a disease of the immaterial mind itself, but of the brain, and often resulting from some injury. Such a diseased state of the organ of the mind, of the very instrument of thought,

or of some part of it, deranges the intellectual faculties just as a diseased state of the stomach deranges digestion. The immortal and immaterial mind is, in itself, surely, incapable of disease, of decay, and derangement; but being allied to a material organ, upon which it is entirely dependent for its manifestations upon earth, these manifestations are suspended or disordered when this organ is diseased." "If the mind could be deranged independently of any bodily disease, such a possibility would tend to destroy the hope of immortality, which we gain from reason: for that which is capable of disease and decay must die. Besides, it would be natural to expect that mere mental derangement might be cured by reasoning and by appeals to the understanding. But attempts to restore the mind in this manner generally prove useless, and are often injurious."

Prof. Maudsley claims that the insane neurosis is in fact a latent madness—a sort of morbid elemental factor inherent in the physical organization; that this condition of nerve element may not only break out into insanity, but that it may in the offspring appear in the form of other neuroses, as epilepsy, neuralgia, &c., and adds: "If we meet in practice with a case of violent neuralgia occurring from time to time, without our being able to assign any morbid cause for it, we may predicate the existence of insanity in the family with almost as much confidence as if our patient were actually insane." He speaks in this connection also of a "well-known law by which a diseased organism strives, as it were, to return to a healthy type, not only in the individual, but through generations, and so occasions a tendency in diseases to die out unless freshly lighted up." If it be true that there is such an inherent organic law, is not this *the* true physiological law, and the insane neurosis only an accidental, or pathological, and

not a physiological factor? Should there not therefore be, under ordinary influences of life, a stronger tendency to return to a healthy than to degenerate into an unhealthy type, as a law of nature? In this contest, which would be most likely to succeed, the law of nature for her preservation, or the law of degeneracy for her destruction? We think Prof. Maudsley admits the former in the very words of his proposition.

The important practical consideration is not to show the biological process by which certain agencies act on the brain to induce disease of that organ; to show that emotion, for instance, increases or decreases the circulation in the brain. This abstruse influence, which belongs to the mysterious inter-relation of mind and body may always evade research. The fact we know, but the primary cause, or just how mind influences matter, we may never know. To say that the mind influences physiological states, is to announce a belief in the possible predominance of the spiritual being over the material structure through which it manifests its existence in the world. This being, in its phenomena, as we observe them, is characterized by spontaneity and by volitional power; the power to originate, to will and to do. The body constantly obeys its dictates, whether in accordance with its preservation and seeming comfort, or in violation of laws of preservation. The body is constantly under its guidance. This is the case whether in a state of sanity or of insanity. Every day we see that grief brings tears; that anger and revenge have expression in the face; that joy has its corresponding physical expression; that habitual mental cultivation will change the physiognomic expression. Now the study of all these phenomena belongs to physiology and psychology, or the relation of mind and body in health. When we have enumerated all the passions, grief, joy, anger, pleasure,

revenge, gratitude, hope, fear, and the like, we have only characterized what we see springing from the human heart in the natural condition of man. When man is insane we find nothing more. Insanity introduces nothing new in the way of mental characteristics. To show that grief, jealousy, disappointment, love, and the like, cause insanity, we must add some factor not found in man in his ordinary normal state. These qualities, or emotions, or passions, as they are variously termed, are always in him, and constitute the evidence that he exists as man.

It will not do to say, that excessive grief, which is a comparative expression as between individuals, because grief influences the physical organization normally, will therefore induce a diseased condition of that organization. Grief may be excessive, intense, prolonged, and yet the person remain sane: so of the other passions. Now what may grief do to cause a departure from health? Can grief cause a mental change, independent of bodily change, and thus under its stress can the mind be overthrown? While the bodily functions are healthfully performed, and the brain properly nourished, and due rest is secured, can any degree of grief cause insanity? Is it not only when the grief is so absorbing as to withdraw attention from the due care of the body, and the brain is consequently ill-nourished and ill-rested that insanity supervenes? Only when the moral cause has induced that degree of functional activity and exhaustion, the necessary effect of which is to transform the physiological action into a pathological state, does insanity ensue, and then through the medium of structural changes. The factor introduced therefore, is disordered function, or disease of the brain.

So of jealousy, and so of excitement in business, or

politics, or religion. These are in one sense moral causes, but as moral influences alone, they are insufficient to induce insanity. As remarked by Dr. Brigham, they must *first* induce physical disease. Or, in the words of Griesinger, the moral cause is potent when "it has become fixed through the mediation of abnormal functional phenomena."

Whatever may be the remote or inciting cause of insanity; however strongly circumstances may tend to harass and weary and depress the mind, insanity will result only as a consequence of a disordered state of the brain. We may enumerate a wide range of what are denominated predisposing causes, such as heredity, sex, age, nativity, social position, education, loss of friends, of property or position, anger, disappointment in love, and yet when we have done all this, we have only shown that in connection with the history of insane persons, we have found facts and circumstances which are also of common occurrence in the lives of those who are not insane. For this reason some professional men are disposed to deny the force of these agencies as predisposing causes. It is a pertinent question, what value should we give to them, and what relation they sustain as elements of causation in producing insanity? It is true as Dr. Maudsley well says: "It can not be in the normal order of events that a healthy organism should be unable to bear ordinary mental trials—much less a natural physiological function, such as the evolution of puberty, the puerperal state, or the climacteric change. When, therefore, the strain of grief or one of these physiological conditions becomes the occasion of an outburst of insanity, we must look for the root of the evil in some natural infirmity or instability of nerve element."

"Not until we apply ourselves earnestly to an exact

observation and discrimination of the mental and bodily conditions, which coöperate in the causation and are manifested in the symptoms of the manifold varieties of insanity, shall we render more precise and satisfactory our knowledge of its causes, its classification and its treatment." "How unscientific it appears, when we reflect, to enumerate, as is commonly done, sex and age, among its predisposing causes. No one goes mad because he or she happens to be a man or a woman, but because to each sex, and at certain ages, there occur special physiological changes which are apt to run into pathological effects in persons predisposed to nervous disorders. How often it happens that a moral cause of insanity is sought and falsely found in a state of mind such as grief or jealousy, which is really but an early symptom of the disease."

The remark of Prof. Maudsley that it is unscientific to speak of age and sex as predisposing causes is true; yet it is not to be supposed, that Griesinger or any other writer to whom he refers, intended, in speaking of these as causes, anything more than Prof. Maudsley asserts, that at certain ages, as puberty and the climacteric periods, of constitutional evolution, the organism is under conditions which predispose to pathological states, from which insanity may result more readily or under the pressure of less unfavorable circumstances. Maudsley admits this fully when he says: "The great mental revolution which occurs at puberty, may go beyond its physiological limits, in some instances, and become pathological."

Griesinger, in speaking of emotional influence in the causation of insanity, says "it may be *direct* or *indirect*. In the first case, the emotions, particularly the passed-off psychical phenomena, are the *immediate* originators of the mental disease, inasmuch as they produce a state

of intense irritation of the brain which now continues." "More frequently, however, the insanity originates *indirectly* through the medium of a pathological process from the psychical cause, inasmuch as they in the first place bring about further deviations from the normal organic processes in other parts from which the cerebral disease proceeds, as a secondary result. If we consider the fact previously spoken of, that the emotions ordinarily disturb, sympathetically, the functions of the organs of circulation, respiration, digestion, and of the blood formation, we will easily understand how these, when long continued or very violent, must cause slight disorders of these functions, and those individuals are most easily affected in whom (owing to congenital or acquired disposition) emotions are most easily excited. Very frequently the cerebral disease commences when after long oscillation some serious pathological change has gradually arisen in some other organ." "It is easily comprehensible that those consequences of the emotions are most frequent and dangerous in the period of life in which the organism is subjected to the greatest expenditure of force, in order to its proper development and further growth, and in which it generally is most capable of disease, viz.: at the period of puberty, during child-birth, the climacteric period."

From this quotation, it is evident that even in these cases in which Griesinger speaks of moral causation, or the direct influence of emotion, he admits the doctrine of a physical pathological change as the only adequate causation, for it is only when the disturbance of the circulation or other influences induce "intense irritation of the brain," "and this irritation continues," that insanity results. This expression, "intense irritation," by no means explains the true nature of the morbid change in the nerve tissue, which constitutes the ele-

mental pathological condition of the brain in which insanity arises—however it fully admits the doctrine that the potential cause must be physical. If further evidence were necessary to show the true view of this distinguished alienist, we have it in his own words, in his solution of the manner in which the predisposing moral causes influence the physical system.

"It is by no means rare after some untoward event which immediately caused disturbance of the cerebral processes, to see the individual become again mentally quiet; but he begins to feel ill, to suffer in various other organs, and it is only after years of constantly increasing deterioration of the constitution, owing to the development of anæmia, or other chronic disease, that mental disease is established."

He says, that under such circumstances, emaciation, indigestion, sleeplessness, palpitation, cough, cerebral congestions, nervousness and hypochondria, neuralgias, menstrual irregularities, and various anomalies of sensibility supervene. "Tuberculosis, chronic heart diseases, are now awakened, or rapidly aggravated, and out of these pathological mediators between first causes and ultimate results, mental diseases proper are finally established."

The question of causation of insanity, while of great interest to the public generally, must be especially so to the medical profession. The wide range of predisposing influences, assigned even by those who have carefully observed the onset and progress of this disease, and given their life-long service to its treatment serves to throw around the subject much of perplexity and doubt. Even some of the ablest superintendents of institutions, and among them, Dr. Ray, have not tabulated or attempted to put into any form, the varying and often remote agencies, which have seemed to exert

a predisposing influence in developing insanity. Is not this a tacit admission of their want of confidence in moral influences as the true and really exciting causes of the disease? Under such circumstances it is not surprising that the general practitioner should feel embarrassed as to what constitutes the inciting and what the exciting cause of the disease. This predisposing or inciting influence of moral causes is not exceptional with the brain, for we have manifest examples of the influence of grief and other depressing emotions over other organs, the stomach, bowels, kidneys. All teachings of medical science declare disease to be a morbid process—a changed physiological state—and if insanity is to be considered a condition consistent with sound physical health, how is it a disease? If this could be admitted, the logical conclusion would be that this was a disease of the mind itself. Some, indeed, hold that the mind, or spiritual being, is itself in some way diseased; though it is more generally claimed that it can not be the subject of disease. Others declare the mind to be mere force or secretion; an essence which results from the physical changes of the structure.

The exciting causes of insanity, as far as we are able to determine, are physical; that is, no moral or intellectual operations of the mind induce insanity apart from a physical lesion. From a circulatory disturbance in the supply of blood to the brain, induced through irregular or excessive use of the organ, or under mental emotions, there may be initiated temporary or even permanent cerebral disease, whereas it is equally true that from an altered chemical condition of the fluids not yet adequately determined, and which may have been superinduced during peculiar natural periods, as gestation, lactation, menstruation in some distant organ, such as the uterus, kidneys, lungs, we may have like results.

If the mind could so contemplate its own operations, its intellectual conceptions, its moral ideas, its emotional states, as to pass into a state of insanity, as it passes into a state of joy or grief, or jealousy, then insanity is no disease. The mind merely overthrows itself by excessive or erratic action. Under the same interpretation of phenomena, dementia would be simply the generation of less force. But assuming that mind is force thus generated, how is the force or mind to become deranged, or stopped, while the machine is in order which creates it? How is any external cause to operate on this force, if it is simply a product of nerve changes?

Perhaps the best illustration of insanity without apparent dependence upon physical causation, is what is called impulsive insanity. Prof. Maudsley, in attempting an explanation of this form, makes this statement, in which he has to admit its physical origin.

He says:

"A desperate impulse to commit suicide or homicide overpowers and takes prisoner the reason. * * * The impulse is truly a convulsive idea, springing from a morbid condition of nerve element, and is strictly comparable with an epileptic convolution." He represents the insane person as deplored "the terrible impulse," and adds "he is fully conscious of its nature and struggles in vain against it. His reason is no further affected than in having lost power to control, or having become the slave of the morbid and convulsive impulse."

Now if such impulses exist and are organic, if they are convulsive ideas, springing from a morbid condition of nerve element which overthrows and enslaves the reason, the cause and the disease must necessarily be physical. The mind is not even concerned in it, except in hopeless and helpless resistance. It is in one word, a mere reflex action. This is, to our mind, no solution of homicidal or suicidal tendencies in insanity, and we submit is at variance with any sound views of mental philosophy. It

is entirely inconsistent with our experience and observation for many years with a large number of this class of patients. This is a mere assertion, and is the false basis upon which what is called transitory mania, or impulsive insanity, rests. The acceptance of such a doctrine of convulsive ideas by the profession generally, would be opening a door through which every criminal could pass unwhipt of justice. It is a happy phrase for lawyers, and for a class of experts in criminal cases, in which the "enslavement of reason" and the criminal act are conjoined and separated at so nice and brief an interval, as to be well characterized as convulsive. In the language of Devergie, one of the most competent authorities on this question,

"There does not exist, then, transitory insanity in the pure acceptance of the term. Transitory insanity, like all other forms of insanity, has its prodromata, its remote and proximate symptoms, which the world apprehends not, and to which it does not attach sufficient importance; and which sooner or later explain themselves by the delirious act, the act recognized by every one, often prejudicial, and at times of a criminal character. And if, with regard to transitory insanity, we ask where reason ends and mental unsoundness commences, although the question can not be answered, we say that it is necessary first to establish a distinction between the *delirium of insanity* and insanity itself. The explosion of delirium occurs long after the invasion of insanity, and it shows itself in a hasty and sudden manner."—*Psycholog. Jour.*, vol. 12, p. 545.

The history of the classification of insanity shows the tendency, under continued observation and experience, to adopt the idea of physical exciting causation. The fact is, the progress of medical science has compelled this, under the clinical study of the neuroses which has received marked attention during the past few years. The earlier classification was based simply on the character of the mental phenomena observed.

This was undoubtedly an important step toward the systematic study of the disease. The general division into mania, melancholia, dementia and idiocy, were the generic forms, under which were grouped all the various manifestations of mental disturbance and defect.

While this division was perhaps adequate for the purposes of Medical Jurisprudence to determine the question of responsibility, it was found too general for scientific classification. It was found, for instance, that these forms often shaded into each other, that in the same individual melancholia and mania alternated; that persons, admitted into asylums in apparent dementia, frequently passed into a condition of maniacal excitement, and that in the progress of all cases where recovery did not occur, dementia was the final condition. However all attempts to improve a system of classification by a subdivision of these original forms were still unsatisfactory.

A second classification, also suggested by the phenomena of disease was based upon its physical origin, and this has been steadily gaining ground. In 1863, Dr. Skae, of Edinburgh Royal Asylum, proposed a classification before the Medico-Psychological Association, based on the bodily causes and natural history of the disease; and in 1869, a committee of that association recommended this classification, and also one proposed by an inter-national congress of alienists, held in Paris in 1867. The latter proposed to arrange cases according to the causation, as for instance: Insanity of pregnancy, of childbirth, of lactation, climacteric, from uterine disorder, tuberculosis, masturbation, alcoholism, post febrile, and the like. The method of classification according to the pathological cause, is both clinical and scientific, and conforms to that adopted in the study and treatment of other diseases. This

is indeed the only classification under which this form of nervous disorder can be studied with any hope of success, either in respect to its etiology or treatment.

To the mind of a medical man the expressions mania, melancholia, dementia, convey no idea whatever of the physical condition; they merely suggest a state of mental excitement, or depression, or enfeeblement. To say that a patient has lost property or friends, or has attended some religious revival, certainly gives him no clew as to the condition of his bodily organism, and without an inquiry into this no suggestion of rational medical treatment could arise. If nothing more was demanded it would make no difference whether the patient were placed in the hands of a doctor, a priest, or a jailor. If with the mental phenomena above described and the moral causes suggested, we learn that he is sick, broken down in general health, sleepless from an anæmic brain, or that he has phthisis, or enfeebled or impaired digestion or other recognized functional or organic disturbance, then the case is brought within the sphere of medical investigation and the resources of our art. Some writers on this subject, chiefly those who are only theoretical, and have had no practical experience in the observation of the disease, only confuse the reader and the young student by presenting the former classification as a metaphysical one, and the latter as materialistic. Nothing could be more illogical, as metaphysics and materialism have nothing whatever to do with the question. The former, as has been stated, is merely a classification based on the mental phenomena, and the latter on the physical. The error into which these writers fall is due to a want of recognition of the fact that insanity is simply a disease, and like all other neuroses has physical and psychical symptoms. The mere fact that the psychical symptoms are so marked and pronounced in

insanity, is due to its cerebral connection. In cases of fever we should not think of classifying according to the nature of the delirium, as we recognize that phenomenon as a mere symptom of disturbance of cerebral circulation. While the psychical classification is understood simply as set forth, no harm can result from its use. It is only when it carries with it the false idea of a disease of the mind itself, that it misleads those who accept it.

We have always used the simple classification of Pinel into mania, melancholia, dementia and idiocy, but dividing mania into the forms of acute, sub-acute, chronic and paroxysmal; considering this preferable to one which is based upon the special form of delusions or the habits developed in the course of the disease. If we should adopt any change from this simple classification, so well understood, it would be one conforming to the physical character and history of the disease as revealed in its pathological causation. For many years we have attempted to conform in the tabulation of causes to the development of this latter idea. We have deemed the study of the true physical causation as of far higher moment, however, than a mere nomenclature.

As to predisposing causes, they should not be confounded in the mind of the physician with the exciting, or potential physical change with which he has to deal as a matter of treatment. The former are questions of social science, hygiene and prophylactic, or preventive medicine, and can only be investigated in relation to communities and not as to individuals. As Griesinger says: "Their mode of action being quite uninvestigable," these remote causes and their relations I shall not here attempt to discuss. Among them are enumerated, nationality, climate, seasons, educa-

tion, social position, vocation, habits of life, vices, crimes. Among special predisposing causes we have already referred to heredity, sex and age.

The physical or directly exciting causes are those which immediately concern the physician in his relation to his patients. He must in any individual case, it is true, take into consideration all the predisposing or inciting influences as well as anything which has combined to produce the lesion or lesions.

The real study of causation is the study of disease in its accepted and legitimate signification. In the words of Griesinger: "Even the theory of insanity can not be understood without a full knowledge of its causes and of its mode of progress in individual cases: therefore, the etiological questions are the most important in the whole range of mental therapeutics."

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REVIEWS OF BOOKS.

On Epilepsy, Anatomo-Pathological Notes, with original plates and engravings. By M. GONZALEZ ECHEVERRIA, M. D., (Univ. Paris,) Professor of Mental and Nervous Diseases at the University Medical College of New York; Physician in Chief to the New York Hospital for Epileptics and Paralyties; Visiting Physician to Charity Hospital, Blackwell's Island, N. Y., &c., &c. New York, Wm. Wood & Co., 1870: 8vo., pp. 386.

No disease of the nervous centres has probably received more attention in every age of the world than that protean form of convulsive seizure known generically as epilepsy. There is, consequently, no lack of works treating it from every stand-point of pathology which the mind of ancient or modern times has at various periods adopted. From the demoniacal pos-

session to which it was ascribed by the monkish physicians of the middle ages, a reflection of the *morbus sacer* of the Romans, to the most rational and advanced views entertained by living pathologists, the disease has always been viewed as a more than ordinary neurosis from its inevitable disposition to degenerate not only the physical, but all the moral character of its victims. Its association with crime as an inciting cause has, therefore exalted it to a rank which places it almost on a footing with mania. The correlation of epilepsy and insanity is found daily to be a closer one than physical symptoms alone would seem to indicate. In proportion also as the reciprocal influences of the great sympathetic upon the brain and cord shall be unfolded, there is evidence that we shall find the starting point of many inductions relating to the emotional centres, whence radiate through organic channels, psychical conditions of an irrepressible character.

Dr. Echeverria, from a long and critical study of the subject, has presented us in his book with all that is scientifically recognized as belonging to the history, pathology and therapeutics of epilepsy. We are, at least, sure of what his views upon the vexed question of its initial points are at the very start, for, in the first chapter, after reviewing with great fairness of statement the opinions of his predecessors, he adopts essentially the views of Van der Kolk, dwelling with peculiar emphasis upon *unconsciousness* as the one pathognomonic sign of greatest value, since it may by itself, constitute the entire observable epileptic paroxysm. We think this a point of great significance, and not sufficiently appreciated by the authors who have preceded him, for, in a number of cases, the patient so entirely forgets himself, as, without falling, to commit acts of which he remembers nothing, and if those

acts be criminal, it is at once seen how easily an ordinary witness to the transaction might testify that the party was in his full senses.

The pathological anatomy of the disease has received at the hands of Dr. Echeverria the most thorough and yet concise treatment which we have ever met with. Without overloading his text with any unnecessary expansion of morbid histology he has described the physiognomy of lesions with great clearness and nicety, adding further to them the culminating force of most excellent illustrations. These engravings are an addition to the value of the volume which can not be overestimated, and as they serve to fix the characteristic changes induced by particular lesions, so they are a fair standard of what we may expect to find of a similar character, in cases exhibiting ordinary symptoms.

The very subtle relations of the *petit mal* to the *grand mal*, together with that most inscrutable of all the phenomena belonging to epilepsy known as its *aura*, have elicited from the author a most critical disquisition upon the differential diagnosis of these transitional states. The question is investigated under the light of 306 cases personally witnessed and the conclusions arrived at have been tabulated for purposes of immediate reference. We need hardly advert to the value of testimony of this kind in supporting the author's conclusions, giving in this way a clinical basis to his argument.

The treatment of the disease under Dr. Echeverria's hands, shows as experience had long before demonstrated, that there is no *specific* for epilepsy. The ordinary narcotics have each their time and place, but all fail at last as single elements in therapeutics. In fact the treatment as in all neuroses must be hygienic and prophylactic as well as medical or surgical, since

by ignoring these, we shall find medicine alone painfully uncertain.

The subject of epileptic insanity becoming of late of increasing importance in our medical jurisprudence, has been only touched upon in this volume, but as the author promises us a separate monograph upon that vexed problem, we shall look forward with much hope to anything from him. Dr. Echeverria has enjoyed opportunities both here and abroad of a rare character to study clinically the phenomena of epilepsy. He has been in charge of an institution specially allotted to its treatment, and as a patient investigator of and careful writer upon all the phases which it presents, he has given us a work written with a candor and exactness that seems to court rather than shun criticism, and which is destined to remain for all time an authority upon the subject which it so ably treats.

On Cerebria and other Diseases of the Brain. By CHARLES ELAM, M. D., London, Fellow of the Royal College of Physicians, &c.: Philadelphia, Lindsay & Blakiston, 1872.

The design of the author is distinctly stated in the preface to be "to bring into notice more prominently than has been done heretofore, the distinctive phenomena of Inflammation of the Brain Tissue, as contrasted with similar affections of the membranes."

In pursuance of this object he treats of a form of disease to which he has given the name of Cerebria, and which is thus defined: *A spontaneous, acute, general inflammation of the substance of the brain, unaccompanied with meningitis.*

Without further preface I pass on to the consideration of Cerebria in detail. It is a disease which *may perhaps* occur at any period of life, although I have never seen it before 8 nor after 36 years of age. It is certainly much more frequent between 10 and 30 than at any other ages. It is uniform in its commencement and

its termination. It begins with vomiting, and ends with death. The intermediate phenomena are not very striking, and the duration is from 36 hours to 12 days. It differs, in the most marked manner, from the forms of encephalitis hitherto described, in its causation, its mode of invasion, its progress, and its morbid anatomy; all of which will be fully apparent, after passing in review, as briefly as is consistent with precision, the cases by which I propose to illustrate these remarks. In doing this I shall keep in view, especially, the natural history of the disease, referring but very slightly to the treatment, for reasons hereafter given; and only so far to the morbid anatomy as may be sufficient to identify clearly the nature of the affection.

CASE I.—H. F., a boy, aged 10, previously in good health, vomited once on the morning of June 10th. In the evening I saw him, and was informed that he was then much better. He had complained slightly of headache at the moment of vomiting, but there was little or no remains of the pain afterwards. He was not in bed, and seemed very much in his usual state, except some little languor. The pulse was about 70, regular and moderate in tone. The tongue was slightly furred, and the bowels not quite so regular as in ordinary. He denied positively and repeatedly having any pain in the head, or feeling ill in any way. I could detect no such alteration in the pupils, nor such modification in any visible or perceptible function or organ, as to lead me to suspect serious disease. My prescriptions were little more than formal directions as to diet and general management.

For reasons unnecessary to mention, I called at the house the next day about 11 A. M. The mother said, in answer to my inquiries, that her son must be better, he had slept so well; and was in fact asleep still. This at once excited my suspicions, and going up stairs, I found the boy pulseless, rather cold, and unable to be roused to any degree of consciousness. From this condition he never rallied, and he died the same afternoon, about 32 hours after the vomiting.

Post-mortem Examination—35 hours after death.—No trace of disease in the stomach, or any of the abdominal or thoracic organs. *Head.*—The sinuses a little more full than usual; but the membranes showing no signs whatever of disease. There was no effusion, except to a very trifling amount in the lateral ventricles. The brain substance alone showed marks of pathological change—being very closely dotted with red spots; the gray matter was darker than usual, and the white matter slightly rosy. The texture of

the brain seemed to be about normal, neither being softer nor harder than the average. There was no microscopical examination made of any part of the brain; but no doubt remained on the mind that this was a case of pure, uncomplicated, idiopathic, inflammation of the brain substance.

CASE II.—W. L., a boy, aged 13. The commencement of this case, on February 20, 1867, was as nearly as possible identical with that of the last. He had been previously well, and without any premonitory signs had vomited once, a few hours before my first visit. He also was dressed and following his usual boyish avocations. He confessed to a very slight headache, but rather declined to admit that he was at all out of health. His mother in some sort apologized for sending for me on what she called "such trivial grounds," but she was nervous and fanciful (she said) owing to losses of other children.

I observed nothing in the pulse, the eye, or the state of the skin, to direct my attention to any danger; and was rather disposed, from the condition of the tongue, which was whitish, to ascribe the sickness to the ordinary indigestion of boys.

On the 22d the state of matters was much the same. There had been no more sickness, the bowels had acted freely, he had taken some food, and had slept moderately well, occasionally saying a word or two in his sleep. The pulse was 68, regular, but not of very good volume. There was some indisposition to be examined, especially as to the eye, and a general slight languor, which was unlike the natural temperament. Still there were no marked or pathognomonic symptoms, and I confess that at this time I suspected no danger.

From this period there was a gradual decline in strength, but no paralysis. There was an increasing tendency to semi-stupor, but no coma. There was occasional slight wandering and muttering during sleep, but no constant delirium. He could always be roused to answer coherently, until the last two days of life. The organic functions were performed with due regularity, and the excretions were evacuated consciously. On the 26th, he surprised the attendants by suddenly getting out of bed to use the chamber utensil; he seemed to be in full possession of his muscular power, getting out of and into bed again without assistance.

Four days after this, on March 1st, he died;—that is, on the tenth day from the original sickness. Death was not preceded by convulsions, nor any phenomena more marked than those already described.

I should have mentioned that the pulse was not much affected until three days before death, when it became quicker and not so regular, and that there was no marked sensory disturbance throughout. He always stated that he had no pain, in his head, or elsewhere; but a slight frown often occurring seemed to point to some uneasiness, which he could not define, or would not be troubled to dwell upon.

Post-mortem—22 hours after death.—There was nothing worthy of note in any of the abdominal or thoracic organs.

The membranes of the brain were quite healthy. This was a matter of surprise to me, as from the family history and tendencies, I was prepared and expecting to find some evidence of tubercular meningitis. However there was none. But abundance of mischief was found in the brain substance itself. The whole mass of the brain was so altered in texture by inflammatory action, that it could not support its own weight, nor hold together. No sooner was it removed from the head, and placed on a dish, than it gave way, falling from together, and flattening like an imperfectly-made mould of jelly. The commissures were all ruptured by the weight of the hemispheres. The white matter of the brain was throughout soft, and pinkish in color. On cutting it, it smeared the knife with a streaked stain.

Microscopically examined, there was no pus, but an abundance of exudation corpuscles.

There was no excess of fluid in the ventricles, nor in the meshes of the pia mater.

I have never, on any occasion, seen a brain so thoroughly disintegrated by idiopathic acute disease; and it was a subject of most perplexing consideration to compare this entire destruction (so to speak) of the whole brain, with the comparatively slight and undistinctive symptoms during life.

Doctor Elam claims that the disease in each case was cerebral inflammation: that this inflammation was confined to the brain substance: that the idiopathic nature of the affection was indicated by the history of the cases; and on these grounds, he asks for the recognition of a special cerebritis, uncomplicated, general and idiopathic, called Cerebria. He devotes considerable space to the differential diagnosis between cerebria and other forms of brain disease with points of resem-

blance, in the chapters on partial acute cerebritis, chronic inflammation and softening of the brain. The other chapters on "Tubercular Meningitis," on "Some Organic and Pseudo-Organic Diseases of the Brain," on "Symptomatology," on "Paralysis as a Symptom," and "On the treatment of Inflammation of the Brain," contain interesting matter, and are worthy of a careful perusal.

In the introduction Dr. Elam asserts, basing his conclusions upon the total statistics of England, that during the last thirty years, while the population has increased thirty per cent., the mortality due to diseases of the brain has multiplied nearly four fold. This is attributed to the fact that "the great development of railway and telegraphic communication has resulted in an enormous increase of business transactions, entailing a vast augmentation of the cares, worries and anxieties of life. The brain, receptive of all impressions, and originating all volitional impulses, has a double load to bear in the economy. The 'struggle for life' is ever increasingly severe; every throe of this struggle implies disintegration and waste of brain tissue, and whilst the chances of irregularity or disorder in the nutritive changes increase in a geometrical ratio, the increase of disease is a logical sequence."

A Study of some points in Pathology of Cerebral Hemorrhage.

By CH. BOUCHARD, Docteur en Médecine-Interne des Hôpitaux de Paris, &c., &c. [Translated from the French by T. J. MACLAGAN, M. D., Edin.] Maclachlan & Stewart, 64 South Bridge Street, Edinburgh. London, Simpkin, Marshall & Co, 1872.

This work, recently translated by Dr. MacLagan, was first published in Paris in 1867, and from the interest attached to it, and the novelty of the views presented, is said to have attracted much attention. "It is considered the most original and important of all the works pub-

lished on the subject of Cerebral Hemorrhage." As the attention of the profession is now directed to the condition of the minute blood vessels both in health and disease, any contribution to the subject, and especially from so competent an observer, is worthy of careful consideration. The author, passing by the various pathological conditions which accompany the ruptures of vessels, with extravasation either outside the dura mater or upon the external surface of the brain, restricts his researches "to the hemorrhage which results from the rupture of vessels situated in the substance of the brain itself." The causes of such ruptures as reported by various authorities, are grouped under the three heads:

1. From abnormal tension of the blood contained in the vessels.
2. From changes in the consistence of the surrounding tissue which is primarily affected and no longer affords sufficient support to the vessel.
3. From diminished resistance of the walls of the vessels which have lost their natural cohesion.

The different causes which may produce increased tension of the blood in the vessels, as increased impulsion, from hypertrophy of the left ventricle; incrustation of the large arterial trunks, by the resistance they offer to the lateral effort of the blood; obstacles to the return of blood, as tumors pressing on the vessels; obliteration of the sinuses or jugular veins by phlebitis or thrombosis; traumatic lesions and diseases of the thoracic organs accompanied by stasis or asphyxia, are considered, but looked upon as greatly exaggerated in their power alone and without other complications to produce hemorrhage into the cerebral substance. "Upon the whole the local and general changes which lead to

increased tension of the blood contained in the vessels of the brain, play but a limited part in the pathology of cerebral hemorrhage." Of the second cause—diminished consistence of the brain—the author traces the origin of that hypothesis, the truth of which some writers have so freely admitted, to Rochoux, who says: "The walls of apoplectic cavities are surrounded by a layer of cerebral matter from one to three lines in thickness, of a canary yellow color, pale, very soft, scarcely of better consistence than some creams and but slightly miscible with water." He leans to the opinion that this softening precedes the hemorrhage. Different authorities are arranged as supporting or denying this hypothesis. Bouchard, however, assumes and apparently proves by one strong case at least that this softening does not precede the hemorrhage, but is largely the result of imbibition of the serum of the blood.

The case referred to is that of "a woman who died after repeated attacks of cerebral hemorrhage coming on suddenly during an attack of jaundice. All the tissues were more or less colored by bile. But the coloration was most marked in the substance of the brain amid each apoplectic cavity to the depth of about a half a centimetre. The cerebral tissue at these points was likewise diminished in consistence, but presented no histological change." "Imbibition then appears to me to play an important part in the production of that diffused condition of the cerebral pulp which is found amid apoplectic effusions." He also states, and this to our mind is the strongest point in the proof, that "When the effusion is quite recent, microscopic examination fails to discover any change of structure."

He further shows that this softening is also due in part to atrophic degeneration of the torn nerve tubes, and sometimes, also, to slight inflammation of the lacer-

ated cerebral tissues. It does not merit the name of *pre-hemorrhagic* softening. The next point treated is capillary apoplexy. This our author defines to be not a disease but an anatomical condition common to various diseases. Not a special form of hemorrhage but a peculiar disposition of the extravasated blood. In other words capillary apoplexy is an extravasation into the perivascular membrane which surrounds the arteries of the brain. This perivascular membrane was discovered by Robin in 1855, and is described as an extra coat or tunic, separated from the vessel by a small space which is filled with a colorless fluid. The membrane may be so distended by the extravasation as to give way under pressure. Small cavities are thus produced in the cerebral substance. This, it is claimed, shows that capillary apoplexy may precede the hemorrhage; that it is the first stage of an effusion that results in a hemorrhagic cavity.

The third chapter treats of the changes in the vessels of the encephalon to which cerebral hemorrhage has been attributed. The first mentioned, is the fatty change of the capillaries and small arteries. This change was pointed out by Robin in 1849, though the theory of its probable connection with apoplexy was propounded by Paget in 1850.

In accord with the views of Billroth, the writer believes that fatty degeneration of the small arteries of the brain may not always be a primary lesion, but dependent upon change in the surrounding tissue. He also thinks that in degeneracy of the brain-substance similar changes may be produced in the vessels of the affected part. He points out the error into which many observers have been led, in supposing that the fatty granules in degeneracy were deposited in the vessels themselves or in their walls, when in fact, the vessels

were not diseased, but the deposition had taken place in the lymphatic sheath, and in groups around the vessel. The cases in which changes are noted in the vessels, are those in which softening had affected the surrounding cerebral tissue. From these and other points the conclusion is drawn, that as the diseased condition of the arteries is developed subsequently to the cerebral lesion, it can not be regarded as the cause of hemorrhage into the brain. The part which many authors, as Paget, Hasse, Todd and Eulenburg have ascribed to it in the production of hemorrhage is formally denied.

Another order of vascular change, aneurisms of the vessels of the brain is then considered. Dissecting aneurisms of the brain were first described by Pestalozzi, though named by Virchow. Bouchard analyzes the cases given, and places them under the head of effusion into the perivascular membrane, a preexisting cavity, and therefore disposes of them at once as in the case of cerebral apoplexy. They are not the cause of hemorrhage, but the first stage of it.

The influence which incrustations of the large arteries at the base of the brain have in the production of hemorrhage is discussed. From statistics of cases and from the examination of observers subsequent to Abercrombie, the fallacy of attributing any important share to this cause in inducing hemorrhage, into the cerebral substance, is made apparent, though due credit is given for its influence in meningeal hemorrhage. Thus far only negative results have been reached. We have not found, in the opinion of the author, the real cause of the disease, though some causes acting secondarily have been pointed out.

In chapter IV. a hitherto undescribed change in the small arteries of the brain is given as the most frequent

cause of cerebral hemorrhage. "This lesion consists in an altered condition of the arterial system of the brain with the production of aneurisms on the intercerebral arterioles. These aneurisms which generally exist in large numbers in the brains of those who die of sanguineous apoplexy are developed slowly, precede the seizure by a variable and often long time, and finally giving way under the influence of some accidental cause, determine the effusion which forms the apoplectic cavity. To these aneurisms we have given the name of miliary aneurisms."

At first they were detected only in cases of senile hemorrhage, but since that time the two observers Charles Bouchard and J. M. Charcot have been able to verify the fact that they occur at all ages in cases of cerebral hemorrhage. They therefore affirm that it results from the rupture of miliary aneurisms and that the true pre-hemorrhagic lesion consists in the production of these aneurisms, and further that the production and subsequent rupture of miliary aneurisms might be called the *disease, cerebral hemorrhage*.

The aneurisms are visible to the naked eye, and are from one-fifth of a millemetre to one millemetre in diameter. In color they vary from a deep violet red to a brown or even black according to the state of the blood contained therein, and are found in all parts of the brain; most frequently in the optic thalami and corpora striata.

They are found in various numbers, from two or three to hundreds. A large number of cases have already been collected, in which they have been discovered in different portions of the brain. For the histological changes in the vessels and other points of interest regarding them, we refer the reader to the volume itself.

The work of translation has been admirably done, and the work is entirely free from those idiomatic or ambiguous expressions which sometimes exist in translations, and constantly remind one of the transfer from the original language. We consider this a most important contribution to our knowledge of the subject of cerebral hemorrhage.

Illustrations of the Influence of the Mind upon the Body in Health and Disease. By DANIEL H. TUKE, M. D., M. R. C. P. Philadelphia, Lindsay & Blakiston. 444 pages. Price 5.50.

Dr. Tuke is well known to the profession both in England and this country, as the joint author with Dr. Bucknill, of the "Manual of Psychological Medicine." To those engaged in the specialty, his name is familiar from his frequent contributions to the *Journal of Mental Science*, in which portions of the present work have already appeared. The object of the writer is thus succinctly stated by him:

"To collect together in one volume authentic illustrations of the influence of the mind upon the body, scattered through various medical and other works, supplemented by those falling within his own knowledge."

"To give these fresh interest and value by arranging them on a definite physiological basis; to show the power and extent of this influence, not only in health in causing disorders of sensation, motion and the organic functions, but also its importance as a practical remedy in disease. To ascertain as far as possible the channels through and the mode by which this influence is exerted. To elucidate by this inquiry the nature and action of what is usually understood by the imagination."

In pursuance of this object he has divided the subject in accordance with "the three-fold states in which the mind acts upon the body." Intellect, Emotion, Will.

The influence of each of these states upon sensation, upon the voluntary muscles, upon the involuntary muscles, and upon the organic functions, constitute the heading of the chapters.

Part IV. treats of the influence of the mind upon the body in the cure of disease.

Dr. Tuke has carefully avoided all metaphysical speculations or theories, and has presented only the mental and physical phenomena by illustrations of their inter-dependence. These vary from the slightest changes in sensation to the production of paralysis and convulsions, and even of death, by mental influences. There are in all 430 cases. Of the intellect 154, emotions 243, volition 33. In the concluding chapter, entitled Psycho-therapeutics, a practical application is made of the influence of the mind over the body to medical practice. There is here a great moral power, one which has been successfully employed by quacks and charlatans, and too much ignored by legitimate medicine. To its use Dr. Tuke urges his medical readers; to non-professional readers he discloses the success of some of the fashionable modes of treatment current at the present day, and claims to explain the phenomena of modern Spiritualism by reference to the principles laid down in these pages. The book is an interesting one to both classes of readers, and is specially valuable in the fact that it brings together in concise form so many illustrations of mental influence upon physical states, both in health and disease, and recalls a source of power, which is too commonly ignored, that the physician has and can rightfully employ in treating disease.

It is presented by the publishers in clear type and good binding.

REVIEW OF REPORTS—FOREIGN.

Report of the Rockwood Lunatic Asylum, Kingston, Canada:
1871. Dr. JOHN R. DICKSON.

There were in the Asylum at date of last Report 335 patients. Admitted since, 55. Total, 390. Discharged recovered, 22. Died, 18. Transferred to Toronto, 1. Total 41. Remaining, 349.

Although this is an Asylum for Insane Criminals and "by law declared to be a part of the Kingston Penitentiary, not more than a tenth of its present inmates are convicts." Dr. Dickson has enhanced the statistical value of his report by largely increasing the number of tabular statements. There are twenty-three in the present Report which embrace a great variety of topics. A large amount of labor has been performed by the patients in ornamenting and beautifying the Asylum grounds. Even the very soil was borrowed earth placed as a top-dressing where the out-cropping rocks had been removed for several feet. Additional boilers have been obtained, and it is hoped that the defect in the present system of warming the Institution, arising from the unequal distribution of the heated air will soon be obviated. The Asylum is still lighted by oil, which it is recommended should be superseded by gas, certainly a very proper recommendation both for comfort and safety.

Report of the Royal Lunatic Asylum of Aberdeen: 1871.
ROBERT JAMIESON, M. D.

Number of patients at date of last Report, 434. Admitted since, 160. Total, 594. Discharged recovered, 84. Unimproved, 59. Died, 22. Total, 165. Remaining under treatment, 429.

First Annual Report of the Cheshire County Asylum in the County of Chester, England: 1871. P. MAURY DEAS, M. D.

This Institution was opened for the reception of patients in May, 1871, and has had during the year 317 patients under treatment. A full description of the building, with the expenditures for the same, is given in the Report of the Commissioners. One feature which is of interest is the utilization of the sewerage by the irrigation plan, which has been represented as successfully employed in many English cities and villages, and to have proved advantageous in an economical and sanitary view. Dr. Deas, the Superintendent, formerly Assistant Physician at the Morning-Side Asylum, presents some judicious remarks regarding treatment, especially on the abuse of sedatives when employed simply to control or repress excitement; to this use or misuse of chloral he attributes many of the injurious consequences which have caused it to be looked upon with suspicion, and even to be discarded by some practitioners. He adds further testimony of its value as a simple hypnotic. The usual statistical and dietary tables are appended.

Sixteenth Annual Report of the United Lunatic Asylum: 1871.

W. PHILLEMORE STIFF, M. B.

There have been under treatment during the year 480 patients. The recoveries have been nearly 38 per cent. of the admissions, while the general average in the English county asylums for ten years has been about 36 per cent. The death rate for the year was 11 per cent., while the general average of all the asylums for ten years has been about 8 1-2 per cent. Five of the patients have been inmates more than 30 years, and one more than 43 years, and 77 patients were upwards of 60 years of age. This is the sixty-first report of the

original Institution which was formerly known as the General Lunatic Asylum.

Annual Report of the Royal Edinburgh Asylum, 1871. DAVID SKAE, M. D.

There were at date of last report, 723 patients in the Asylum. Admitted since, 269. Total, 992. Discharged recovered, 80. Improved, 27. Unimproved, 59. Absent on probation, 8. Died, 76. Total, 250. Remaining under treatment, 742.

The reports of Dr. Skae are always instructing, and the one before us does not constitute an exception. The feature of the report is the classification which is in accordance with the theory advanced by him some years ago, of naming the mental disorder as far as practicable from the exciting or pathologic cause. Thus we find the insanity of syphilis, of atheroma, of masturbation, of lactation, &c. This classification is more scientific than the one in general use, and if adopted would lead to more accurate clinical investigation of cases. It also has the advantage of presenting in one phrase the form and cause.

An appendix is added by Dr. S. H. Wright, Assistant Physician, in which a history is given of some of the cases, especially as regards the causation of insanity. There is also a tabulation of the causes of death and a "review of the relation existing between the course of the fatal bodily disorder and the nature of the patient's mental insufficiency during life."

TRANSACTIONS OF SOCIETIES, AND PAMPHLETS RECEIVED.

Transactions of the State Medical Society of Michigan: 1872.

The address of the President, Dr. Homer O. Hitchcock, of Kalamazoo, upon "Modern Medicine," its status in modern society, gives a general history of med-

ical science from the age of the Asclepiades to the present time. It is replete with classical allusions and does credit to the scholarship of its author. He claims superiority for modern science in its most exact diagnosis of disease, by aid of instruments and improved methods of investigation, and in its means of cure, by aid of a "materia medica" largely enriched by modern research. He alludes to the position of the profession in regard to certain special forms of disease, as insanity and idiocy, and with pride to the standing, among the members of the medical profession, of the Michigan Asylum for the Insane, which he says, "as one of a trio of institutions, has been placed at the very head of this department of medicine." The paper of Prof. J. F. Noyes, of Detroit, on the use of the ophthalmoscope, is a practical article, and shows the value of the instrument in the positive diagnosis of injuries and diseases of the eye which, without its aid, might have remained undetected, or involved in obscurity. Several other articles and reports of cases render the *Transactions* valuable to the members of the Society and the profession generally.

Transactions of the Indiana State Medical Society: 1872.

This volume always comes to us in a neat dress, printed on tinted paper, and in clear type. It reflects credit upon the Society and the publishers. Among other papers of interest to the specialty we note one on "Medico-Legal Science," by Dr. Thad. M. Stevens, of Indianapolis, the editor of the *Indiana Journal of Medicine*. He treats of medical experts, their duties, and the peculiar difficulties under which they labor in giving testimony, and advocates the appointment of a corps of experts by the Courts, or legislative action. He speaks briefly of hypothetical cases, of suits of malpractice, medical coroners, toxicological examinations, and of expert testimony in insanity.

S U M M A R Y.

HABEAS CORPUS.—“The confinement of sane persons in Lunatic Asylums,” is a popular newspaper heading. The power of the writ of “habeas corpus” is frequently invoked in cases of patients in asylums, on the ground of the sanity and improper detention of the individual. The people are naturally and properly jealous of their rights, and demand that every safe-guard should be thrown around the personal liberty of the citizen, and the suspicion even that this is any way restricted unless imperative and manifest necessity exists, leads to immediate and often hasty action. The effect is that such institutions come to be regarded with an unjust suspicion, and an antagonism seems to exist between them and the people, whose interests are identical.

This is to be regretted, and we think would not exist if the subject were viewed from a correct stand point. Asylums for the insane, like other public charities, are erected by and for the people, and the officers of such institutions are to carry out the laws which have been enacted for their control. There can here be no clashing or division of interest between the public and the institutions. They are one and the same, and no officer of any public institution can have any possible object in receiving or retaining any sane person in an asylum.

To say that sane persons are at times committed to their care, is simply to assert that errors of judgment do occur, and that men may err, but that State institutions lend themselves to any base or improper purpose for the sequestration of sane people, we have never

seen the proof. The facts, however, prove that the judgment of those having charge of such institutions is usually correct, and that few mistakes are actually committed, less in number than we might suppose would happen in cases surrounded with such inherent difficulties. No better illustration can be given than is furnished by Dr. Kirkbride's experience. (Annual Reports 1868 and 1869.)

These so-called doubtful cases have been before several of the most distinguished judges who have presided over the courts held in Philadelphia during the last twenty-eight years, and, as I stated in my last annual report, "the officers of the Hospital and the courts have, in nearly every instance, been perfectly in accord; and in the three instances in which they did not agree, it was not in regard to the insanity of the individual, so much as in reference to the propriety of a discharge." The decision of cases that seemed doubtful was often postponed from time to time, till no question existed in the mind of any one; and the patients gained from this wise course on the part of the courts, a security for the future, that they could not otherwise have obtained. Including the three cases first referred to, there have now been discharged in all by the courts, five cases, in regard to whom there was some difference of opinion between the courts and the officers of the Hospital—without, however, the court in any instance saying that the patient was not insane when admitted, or had not been a proper subject for treatment. The two additional cases that have been discharged by writs of habeas corpus since the last report was written, have both been declared insane by regular commissions of lunacy, and are now under guardianship. I deem it only right to say, in addition, that four other cases have left who might probably have secured their discharge by legal proceedings, if they had not been removed by their friends. Of these four, one is now under guardianship, with the authority of the court for his return to the Hospital at any time it is deemed proper; another had been declared insane by a regular commission of lunacy, and by distinguished and impartial experts; one was found drowned in the Delaware river soon after he left; and the fourth shot himself a little time after reaching home. One other case, reported last year, and not included in the above, about whose insanity, in a strictly *ex parte* investigation, there seemed some doubt, was

admitted here, in addition to the ordinary forms, at the special and written request of one of the highest law officers of the commonwealth, a commission of lunacy having been granted by one of our most distinguished judges; but the patient dying before any conclusion was arrived at, the true state of the case will never be positively known.

It is a subject for sincere congratulation that of all the cases from this Hospital in which judicial proceedings have been instituted, and decisions rendered in favor of the discharge of the patients, when the officers of the Hospital considered it premature and unwise, there has never been one where the courts decided that the admission was improper or the patient not insane. Nor has there ever been one in regard to which all experts have not agreed, not only in reference to the insanity of the patients, but also as respects the propriety of their being subjected to hospital treatment; and in nearly every one of these cases, the correctness of these opinions has been abundantly confirmed by subsequent observations, by the decisions of regular commissions of lunacy, or by the patients being again sent to the hospital by special orders from the courts.

The last cases of the application of the writ of "habeas corpus" to which our attention has been called, are those of Rev. Peter H. Shaw and Col. Joseph A. Stockton. They were removed from the Brattleboro Asylum and discharged upon the order of Judge Smalley as being sane. Col. Stockton had been a patient in the Pennsylvania State Asylum, at Harrisburg, whence he was removed by writ of "habeas corpus." He was afterward a patient of the Dixmont Asylum, of Pittsburgh, Pa. While there he was declared insane by due process of law. He was transferred to the Brattleboro Asylum where he has been some three years. Rev. Peter Shaw was an aged Presbyterian clergyman who had been unfitted by years and infirmity for pastoral labors. He is by report a feeble-minded, childish old man who, according to the decision of the judge needed the care of a hospital. His case was apparently one of senile dementia, or the mental enfeeblement of age, a

recognized form of insanity. If such cases are not to be cared for in such institutions why does not law make them an exception? Insane Asylums are hospitals for the treatment of all forms of insanity, and why not for this case which demanded hospital care?

The whole subject of the alleged illegal confinement of sane people was thoroughly ventilated in the *Atlantic Monthly* in 1868. We quote from the article by Dr. Isaac Ray, an experienced superintendent and an eminent jurisprudent, the following:

Of all the bugbears conjured up in these latter times to frighten grown people from the course pointed out by true science and true humanity, it would be hard to find one more destitute of real substance than the alleged practice of confining sane persons in hospitals for the insane. We have yet to learn of the first well authenticated case in this country; and we have heard the same thing asserted by others, whose professional duties have enabled them to be well informed on this subject. Although this does not prove the impossibility of such an abuse, it certainly does prove that it must be an exceedingly rare occurrence.

It is usually found that at the bottom of these cases of "habeas corpus" writs, there is a lawyer and a fee.

As a result of this agitation in Vermont, a demand is made for an investigation into the affairs of the Asylum and an overhauling of the lunacy laws.

The law adopted and endorsed by the Association of Medical Superintendents in 1868, has been proposed by Dr. Samuel Worcester, of Burlington, for the consideration of the people and the Legislature.

From the Report of the State Commissioner, Dr. Gates H. Bullard, we learn that the Institution has cost \$234,870, of which the State has contributed only \$23,000 and an annual appropriation of \$5,000 is made for the Institution, to be divided per capita among the insane poor of the State. Dr. Bullard reports that there are some 400 patients now in the State outside of

an institution, and recommends that the State assume more immediately and wholly the care of all its unfortunates of this class. As this report has been written since the proceedings detailed above, we are led to hope that they may result in promoting the good of the insane.

—We are sorry to be compelled to announce the burning of the Northern Ohio Lunatic Asylum, on the 25th of September last. This Institution was located at Newburg, about six miles from Cleveland. It was built of stone, and had a frontage of some 900 feet. Two new wings, of 150 feet in length, had been recently built and occupied. There were about 600 inmates in the asylum, 150 of whom were transferred from the Central Ohio district, after the burning of that Institution in November, 1868. The fire originated about 1 P. M., near the dome of the central building, and was communicated, it is supposed, from a small furnace which was being used by some tinners at work upon the roof. The alarm was promptly given and telegraphed to Cleveland; but the engines arrived too late to arrest the flames. All of the Asylum buildings proper were burned. The walls of the new wings are comparatively uninjured, and these portions of the Asylum, it is thought, can be speedily prepared for the reception of about 200 patients. The new building recently constructed for kitchen and laundry was saved as was also the engine house and other detached structures. The Superintendent, Dr. J. M. Lewis, was temporarily absent with his family. The assistant physicians and employés of the Institution labored assiduously and systematically in the removal of the patients and property. The patients were all removed

in safety and found shelter in the churches of Newburg, and in the hospitals and public institutions of Cleveland. Miss Mary Walker, an employé and Mr. Benjamin Burgess, of Bedford, were burned to death, and some others received serious injuries. The pecuniary loss to the State is estimated at \$500,000, on which there was no insurance. Ohio has now within four years lost by fire two of her Asylums, and been seriously crippled in her accommodations for the unfortunates, dependent upon her charity. Such calamities should warn States that, in the construction of hospitals, where so many helpless people are brought together, no expense should be spared to render them as nearly fire proof as possible. The fact that aid must be sought from an adjacent city, should teach another lesson, that the legislative power should not leave such Institutions to adventitious help, but should provide, in each case, proper apparatus for extinguishing fires.

NEW INSANE ASYLUM IN CALIFORNIA.—From the report of the Commissioners appointed under an act of the Legislature to select a site for the Branch Insane Asylum, we make the following extract:

Sites presenting some of the prescribed requisites were found in all of the localities visited. In most, fair locations could have been obtained, but only two sites were found promising all the advantages named, viz.: Salubrity of climate, equable temperament, convenience of access, nearness to railroad communication, vicinity of some town or city, beauty of scenery, freedom from mosquitoes, facilities for drainage, and an abundant supply of pure fresh water that can be brought to the top of any building. One of these sites, a map of which is herewith submitted, has been unanimously selected by the Board.

It is situated one and a half mile southeast of Napa City, and contains 208 acres of land, of which about 40 acres are bottom land, 160 table land, and 8 acres of mountain land. Most of the

bottom land is well adapted to the growth of vegetables, hay, etc. The table land is said to be fine grain land, and well adapted to the production of the grape and other fruits; and, as it rises at an elevation of eighty feet to the mile, it possesses a fine site for the buildings, and offers facilities for a perfect system of sewerage and drainage. A fine stone quarry of good building material is upon the 8 acres of mountain land, and adds materially to the value of the tract. The water supply is from a mountain brook of never-failing source, on an adjoining tract belonging to Nathan Coombs, who has generously entered into bonds, in the sum of \$20,000, to convey to the State, for a nominal consideration, all the water privilege that may be required on the Asylum ground, for whatever purpose, now and forever, "reserving only the right to take from the water-works or pipes, or either of them, any excess of water above and beside what is required for the asylum and grounds—the State, by its respective agents, alone to determine when there is any excess," and at a distance of three-fourths of a mile from the east line of the place selected, the water supply may be obtained at an elevation of two hundred (200) feet. The tract is bounded on the west by the Napa Valley Railroad, about half a mile from the site where the buildings will probably be erected; and in full view of Napa City, and the site selected for the Odd Fellows' College, on the west side of the valley.

The report was signed by all the Commissioners, viz.: C. H. Swift, E. T. Wilkins, and G. A. Shurtleff, and in accordance with the provisions of the act, has been approved by Governor Booth, and Dr. Logan, Secretary of the State Board of Health. The site is therefore definitely located at Napa. The State of California has appropriated nearly \$800,000, at one session of its Legislature for this one branch of its charities. We congratulate Drs. Wilkins and Shurtleff, and the other earnest philanthropists who have labored so assiduously in this field, upon the success which has crowned their efforts. The plans for the new Asylum are yet to be adopted. We can but hope that the experience acquired by Dr. Wilkins, and so admirably presented in his recent report will insure for the new Institution a

plan embodying all that is desirable, in accordance with the most scientific and enlightened views of the treatment of the insane.

LAYING OF THE CORNER-STONE OF THE BUFFALO STATE ASYLUM.—On the 18th of September the corner-stone of the Buffalo State Asylum for the Insane was laid with appropriate Masonic ceremonies. Extensive and elaborate preparations had been made for the occasion, but they were unhappily interfered with by a heavy rain-storm which prevailed at the time.

The procession was formed in the following order:

Military—65th and 74th Regiments N. Y. S. N. G.

Carriages—Containing Governor Hoffman, the Orator of the occasion, Hon. James O. Putnam, the Chaplain, the Board of Managers, the Architect, and Invited Guests.

The Masonic bodies, comprising some 800 members.

The exercises were inaugurated by prayer by the Rev. John C. Lord, D. D.

His Excellency, Governor John T. Hoffman, then spoke as follows:

I am glad, my fellow citizens, to be here to-day to take part in this ceremonial. It was my privilege to give my official signature in 1869 to the first act passed with reference to the Buffalo State Asylum for the Insane. That act authorized the appointment of five Commissioners to select a site for an Asylum in Western New York, in the 8th judicial district. The Commissioners I chose were John P. Gray, of Utica, James P. White, of Buffalo, Thomas E. Strong, of Westfield, William B. Gould, of Lockport, and Milan Baker, of Warsaw. They decided upon the city of Buffalo. The Legislature affirmed their action, and in 1870 I appointed the first Board of Managers and signed a bill making the first appropriation for the construction of this building. Further appropriations were made in 1871 and 1872, and now, as my term of office is drawing to a close, I am glad of the opportunity to be present at

the laying of the corner-stone of an asylum, the future progress of which I shall, as a citizen of New York, watch with interest and I doubt not, with pride.

I am not here to deliver a formal address, and have only a few words to say to you. The subject of the treatment of the insane is one that has occupied much of my attention. In 1869, I made an earnest appeal to the Legislature, to make additional provision for the insane poor. The rich can always be cared for; but the insane poor! alas! none so helpless, none so friendless. Their presence in most of the County Poor Houses is alike injurious to them and demoralizing to the neighborhood. Interest, duty and charity, demand that liberal provision be made for them by the State.

In 1869 it was estimated that, outside of the counties of New York and Kings, the insane poor were 1,500 in number. My appeals to the Legislature were renewed in 1871 and 1872, and the Willard Asylum, this one, and the Hudson River Hospital have all had liberal annual donations. I call attention to what has been done in the last two or three years with a view of inducing a continuance of the good work.

The increasing care and watchfulness of the people and of their representatives over the insane is one of the most cheering signs of the progress of civilization. Our whole community is aroused at this time to indignation at the story of a single abuse in a Lunatic Asylum. The demand for investigation and correction must be promptly met; but let us all take comfort in comparing the present with the past. The contrast is great. Less than one hundred years ago in proud old England we read that the insane, instead of being well cared for, were exhibited to the public for money to gratify a cruel curiosity. Less than seventy years ago in the same country we are told that lunatics, being supposed to be under the influence of the moon, were bound, chained and flogged at particular periods of the moon's changes to prevent the accession of fits of violence.

In this State it was not, I think, till about 1806 that the Legislature made any provision for the care of the insane; when an act was passed granting some trifling aid toward the construction of an asylum as connected with the New York Hospital; and that did not much help the poor.

It was within the past forty years that the first act was passed authorizing the construction of a State Asylum. Now we have the Utica Asylum; one at Ovid, an admirable retreat provided for insane paupers; this one which, we trust, will soon be completed

and another of equally grand proportions in course of erection at Poughkeepsie, besides one of smaller size at Middletown, Orange county, all founded and to be maintained by the State.

Within the last five years about three millions of dollars have been expended by the State of New York in caring and making provision for the insane, and within the next five it will expend as many millions more. We hope the time will soon come when no insane person shall be found in any County Poor House, and all shall be treated and cared for in suitable asylums. Distinction between riches and poverty should end when the malady of madness begins.

But I forbear further remarks. These public edifices constructed by the State, testify alike to its greatness and its virtue. The more numerous they are the more abundant the evidences that the people in their prosperity are mindful of what they owe to the Giver of all good.

Let them be multiplied and increased, and let it be the proud boast of the State that its charities are grand.

States, like men, if they would be great must be good. It is the broad spirit of charity which ennobles both.

The Oration prepared by Hon. James O. Putnam, the Orator of the Day, owing to the inclemency of the weather was not delivered, but was published in the daily papers. It was an able and scholarly address. On invitation extended by Prof. James P. White, President of the Board, the Grand Master of Masons, Christopher S. Fox, aided by the members of the Grand Lodge, performed the ceremony of laying the cornerstone in accordance with Masonic usages. In the July number of the *JOURNAL OF INSANITY* will be found a history of the origin of the Institution and a description of the plans and specifications of the buildings. The whole of the proceedings will be published in a durable form.

—The laying of the corner stone of the State Homœopathic Asylum at Middletown, Orange county, N. Y. will take place on Saturday, October 26, 1872.

—The following Circular was received by this JOURNAL:

OFFICE OF BOARD OF TRUSTEES,
HOSPITAL FOR THE INSANE,
INDEPENDENCE, IOWA, July 12th, 1872.

To Whom it may Concern: Notice is hereby given, that the Trustees of the Iowa Hospital for the Insane, at Independence, are prepared to receive applications for the position of Medical Superintendent of said Hospital.

Applicants are requested to state the salary which they expect, in addition to their living in the Institution.

By order of the Board,

JOHN M. BOGGS, Secretary.

We have since learned that Dr. Albert Reynolds, of Clinton, Iowa, was appointed Medical Superintendent of the new Institution. The buildings are already erected, and will soon be opened for the reception of patients.

—We are requested by Dr. E. T. Wilkins to announce that copies of his report, as Commissioner in Lunacy, for the State of California, made to his Excellency Gov. H. H. Haight, can be obtained by addressing the State Librarian, Sacramento, Cal., and enclosing 20 cents for return postage.

AMERICAN
JOURNAL OF INSANITY,
FOR JANUARY, 1873.

MORAL INSANITY.

BY JOHN ORDRONAUx, LL. D.,

Professor of Medical Jurisprudence in the Law School of Columbia
College, N. Y.

It is due alike to the interests of justice and humanity, that the untimely dialectics, born of materialism and swaddled in sciolism which distort the course of all judicial proceedings involving issues of insanity, should be checked in their tendency to convert equitable into sentimental jurisprudence. The law either is, or is not a system of perfected rules for human conduct, founded upon principles inherent in our nature, and recognizing two cardinal points, round which revolve all thinking beings, viz: *reason* to generate courses of action, and *conscience* to regulate them with reference to accountability here and hereafter. Reason and conscience both presuppose freedom in their exercise without which they cease to be regulating principles. In idiocy which is the highest expression of mental deficiency, reason and conscience are simply barren sceptres in the hands of their possessors who are merely bondsmen to the lower incentives of instinct.

The right to choose coupled with the power of doing so, form the basis of all human accountability, and the law resting her presumptions ever upon nature's general operations, assumes that these conditions exist until the contrary appears. Now through these ennobling rights of our moral nature *we are to the eye of the law what we make ourselves.* Both vice and virtue may be cultivated, yet neither is possible without free will, for there is no *fate* in morals, but only personal election, a fact which has led Mr. Stuart Mill, who, certainly is not a *doctrinaire* in matters of religion, to put morality among the *arts*. And it is because of the irrepressible antagonism between *instinct* and *morality* and the sleepless aggressiveness of the former, that the latter needs cultivation even to the extent of systematizing it through the various phases of justice, humanity, forbearance and courtesy. Left only to the dictates of his physical nature man must be selfish, for selfishness is founded upon self-protection; hence he is constantly preferring his own gratification to another's rights, and thus when living in community, necessitates a government of laws as a repressive overseer between himself and his fellow beings.

It is this right coupled with the power of choosing between courses of action, which constitute the patent of man's nobility and elevation above all other creatures, and by the obscuration or loss of which he declines into insanity, and further on, into a state of complete dementia and automatic existence. Being born into society and not formed to live alone, the municipal laws of every country are based upon universality rather than individuality of features in mankind, and the type of the class is necessarily considered before the personal elements of any particular member. Within this extensive periphery of civil relationship,

each member of society is not only permitted, but invited and stimulated by educational aids to develop his individuality; and as every one has his homogeneous humanity underlying his heterogeneous personality, the law contents itself with prescribing rules for the aggregate mass rather than the individual unit. By this means the unit is never extinguished in the mass, but only judged by comparison with it objectively, in all duties of reciprocal obligation, and again by comparison with itself subjectively, in all self-regarding acts. Thus the freedom of the individual is insured as a moral agent, while his subordination is secured by alliance with a mass living under a common sovereignty. It is the old doctrine of *imperium in imperio*, sovereign as a man, but slave to the laws as a citizen. *Nos servi sumus legis* said the great Roman orator in his defence of Cluentius, and no man has ever so well expressed by one incisive phrase, the relations of the governed to the sovereignty of the law.

The introduction of Medicine into Jurisprudence, is the result of discovering that man's nature is dual, and each part of reciprocal influence in producing his character. This axiom is of immemorial acceptance, being repeated as such in every system of philosophy that has ever flourished, and better still, resting upon daily experience, and so become of universal recognition. Lucretius has not overlooked this psycho-physical connexion, giving us in two simple lines the whole theory.

“*Præterea, pariter fungi cum corpore, et una
Consentire animum nobis in corpore, cernis.*”*

In its relations to mankind medicine has two missions to perform, the one physical, the other moral; to heal, and to prevent disease. It heals the body either

* De. Nat: Re: lib: 3. 169.

through subjective or objective agencies; either by causing it to abstain from acts tending to prevent organic functions, or else by administering remedies which restrain excessive, or increase diminished action, until its physiological equilibrium is restored. Such is its physical mission. As to its moral, that, like "prevenient grace" consists in throwing the shield of protection about us, by instructing the mind within what limits to exercise itself, and to use the bodily organs through which it expresses its varying states.

But in its connection with jurisprudence, the office of medicine is purely moral and didactic. Its services are required only for the purpose of enlightening the administration of justice, and this because of the fact that it is considered a science whose principles rest upon natural laws of general immutability. Without this it could not be said to furnish legal evidence, since evidence is the explication of a condition resulting from the operation of some law. The condition is always more or less modal, hence the necessity for interpreting resemblances and analogies so as to assign to each their proper place and value. But medicine can only do this in proportion as it systematizes its laws and classifies the instances occurring under them. This constitutes Medical Logic; a method of reasoning analogous to that adopted in law.

Now municipal law concerning itself alone with finite things, ignores superstition and exacts proof for everything which is the subject of judicial investigation. And this is the case also with scientific medicine, for every other kind is but superstition and jugglery. The first maxim of the law of circumstantial evidence whether in jurisprudence or in medicine is this—"de non existentibus et non apparentibus eadem est ratio." Which translated into a physical proposition means

simply this, viz.: that every effect presupposes an antecedent cause, but sequences are not necessarily the effects of the most proximate cause; consequently wherever any fact exists for which no demonstrable cause can be given, either proximate or remote, it is simply guess-work to attempt to name or classify such as a *typical* effect, since this is precisely one of those cases where the exception proves the rule. Hence, the various paradoxes, whether in geometry or in physics, serve but to establish the stability of those rules from which they appear to be departures. For after all it is in the appearance, and not in the fact that the departure exists, and inasmuch also as our senses permit us only to see the *phenomena* of things, we are, through the deceitful character of these physical interpreters constantly exposed to the error of commuting the subjective for the objective, of seeing as we *feel*, rather than as we can intellectually prove we should see. It is upon this principle of the inherent immutability of nature's operations that the law founds its presumptions, which, being obtained from the same source as are those of medicine, the two sciences are equally obligated to accept the laws governing the universe as the pivot round which revolves every atom of matter.

But, even as chemistry only explains affinity and combination, so physical laws only explain the lower stratum of man's nature, and even as the element of vitality is irreducible in chemistry or physiogy to a precise formula, so the intellectual and moral constituents in man refuse to be explicated by any physical or mathematical terms. One of the great offices of medicine, therefore, in the hierarchy of the sciences, is to abolish superstition, by keeping our dual nature disparted, and ministering to each separately. And it is for this purpose that the law requires her assistance in

all those cases where, by reason of the operation of physical laws, circumstantial or external evidence needs to be interpreted under the light of justice and equity. Had medicine been less encumbered with superstition in the days of Sir Matthew Hale, that eminent juris-consult would not have disfigured the canons of English Jurisprudence, by hanging witches, and establishing a precedent whose high authority subsequently found a trans-atlantic application at Salem. Yet Lord Hale was entirely defensible under the light of his own day, though he could not be so now, for knowledge has, since his day, widened her territorial limits at an unprecedented rate, and a child might teach Bacon the latest application of some of his own methods.

In reality, however, medicine has only a collateral and subordinate relation to morals. Our moral nature recognizes no physical necessity for its existence. It exists, and is not produced or evolved by any process of organic chemistry acting under the direction of vitality. It anticipates, and rises above all physical connection. In other words it is, like the mind, a special endowment. *It feels—it is conscious.* But matter *per se* does neither. Hence, there is no joy and no pain, but in the soul. The intellect we know is limited in its extent or emphasis of expression by the physical state of the organ through which alone it can act in finite life, while the soul has no such restriction upon it. Thus a man with cerebral congestion may not be able to ponder complex problems, or to express himself eloquently, yet he still knows right from wrong, and would feel indignant at any insult offered him. His mind is not disordered even, but only incapable for the moment of a certain amount of tension, although its faculties may remain unimpaired, just as an exhausted muscle can not repeat the acts by which it lost its tone,

until it has first rested. But the moral nature knows no alterations in rhythm, such as constitute the physical phenomena of periodicity. It craves no rest, because it needs none; it never sleeps voluntarily, but only through the narcotizing influences of sin, expressing itself in self-indulgence. The only disease to which the moral nature is subject is SIN. This is the Alpha and Omega of all moral disease, and the key to the problem of moral insanity.

This is practically admitted in the definition given of this psychological paradox, by authors who have written upon it, and whose writings and teachings have imported into the field of rational jurisprudence a metaphysical dogma involving nothing but logical fallacies for its foundation. It can never be other than blasphemous to assume that God in condemning sin did not know the difference between it and disease, and that He could commit the injustice of permitting that very sin to convert itself into a physical disease for the purpose of eluding punishment, at His hands or that of human tribunals. It is not, therefore, from choice so much as from necessity that we are compelled to discuss this subject from a purely ethical standpoint, but the advocates of the theory of moral insanity giving us no pathology through which to analyze the physiognomy of this medico-legal sphynx; and taking particular pains in fact to point out the absence of *all* or *any* symptoms belonging to the sphere of either mental or material life, we shall not surely be charged with selecting the battlefield most advantageous to ourselves, if we enter and meet them upon that one which they have systematically prepared for action by building intrenchments of foreign and domestic invention.

According to Bouvier,* Moral Insanity is defined to be "a *morbid* perversion of the *moral* feelings, *affections*,

* 2 Bouv. Dict., p. 196; *ad verb.*

inclinations, *temper*, habits, and *moral dispositions*, without any notable lesion of the intellect, or knowing, and reasoning faculties, and particularly without any maniacal *hallucination*." This definition, taken from Dr. Pritchard's article in the Cyclopædia of Practical Medicine is open to so many objections, being tautological, confused and inexpressive, that it reflects little credit upon its author, and deserves to be mentioned only to be condemned. Dr. Forbes Winslow, a more recent and more lucid expounder of this doctrine, says that "the person manifests no mental delusion; is not monomaniacal; has no hallucination; does not confound fancies with realities, but simply labors under a morbid state of the feelings and affections, or, in other words, a diseased volition."* This description is further sustained by Dr. Ray,† in the words following:

"The contrast presented in moral mania between the state of the intellectual and that of the moral faculties is one of its most striking features. These patients can reason logically and acutely on any subject within their knowledge; and extol the beauties of virtue, while their conduct is filled with acts of folly, and at war with every principle of moral propriety. Their moral nature seems to have undergone an entire revolution. The sentiments of truth, honor, honesty, benevolence, purity, have given place to mendacity, dishonesty, obscenity and selfishness, and all sense of shame and self-control have disappeared, while the intellect has lost none of its usual power to argue, convince, please and charm."

In the presence of such unequivocal and conceded features of a perfectly rational intellect, may we inquire by what logical process any one can arrive at the conclusion of insanity? By parity of reason why not conclude at once that a person undergoing trial is guilty of the offence charged against him because he pleads mute, or makes faces at the Court or swears at the District Attorney? His doing, or not doing these things, bears

* Plea of Insanity, p. 43.

† Med. Jur. Ins.; § 126.

about as much relation to the question of his guilt as vicious conduct does to the mental condition of a perfectly sound mind. If a mind habitually acts as healthy minds do, it is, to all intents and purposes, in the estimation of the law a sound mind. Any other interpretation would be a solecism and a judgment against evidence.

The foregoing symptoms of moral insanity as given by Dr. Ray, are all striking delineations of what common sense, enlightened by revelation, would call *depravity*. Yet we are asked to believe that these signs constitute evidence of a form of insanity destroying human responsibility. The very conditions in fact which God thundered against, in the law given upon the Mount, and which the inspired Prophets, the Fathers of the Church, irrespective of denominational creeds, and learned divines and authoritative moralists have all agreed upon as constituting *sin*, the defenders of moral insanity term disease. They thus make it appear that the decalogue, and all human laws, are unjust because they visit penalties upon disease, and that in consequence there is no sin except in minor offences. Under this new gospel petty-larceny is crime, while murder or arson are disease;—and the more perfect in lying, stealing, cheating or murdering a man becomes, the more indubitably is he irresponsible.

It is a noteworthy fact in this connection that all the persons described as *morally* insane by Prichard, Pinel, Esquirol, &c., as quoted by Dr. Ray were *maniacs* in asylums, admitted to be such without reference to the presence or predominance, the absence, or the occasional recurrence of *delirium*. The very appellation of *mania sine delirio*, concedes the whole case, and is no more strange than it is to see an insane consumptive without a cough or habitual expectoration. There is

no better settled principle in pathology than that a disease may, in individual cases show an entire absence of some of its most common symptoms at one stage, and an exaggeration of them in another. The rational diagnosis of any disease therefore, is always founded upon groups of symptoms rather than particular ones. But disease belonging only to material organs, and not to an immaterial principle like mind, we must search for it through symptoms belonging only to matter. Disturbed moral nature has no necessary connection with a cognate physical state; it may precede, accompany or follow it without any dependence whatever upon it. Hence no scientific physician ever deduces an existing disease exclusively from the moral state of the patient. Unless he can find material symptoms he has nothing on which to rest his diagnosis. Dare any pathologist affirm that because a man's mind is worried, he must therefore owe it to dyspepsia, or because he is dishonest or cruel that his bile must be perverted, his blood acidified, or his lymph grumous? Yet courts are asked to instruct, and have so charged juries that a man who has committed crime must be considered irresponsible because of its enormity, and its incomprehensible motivelessness; or, more absurdly still, that a man previously healthy, sane and morally responsible, may have a sudden seizure of transitory diabolism, blasting for a few minutes his reason and his self-hood, yet only continuing long enough to commit a crime, and by thus propitiating the spirit of evil, freeing himself at once from the tyranny of its presence and the imperative of its behests.

It is owing to this introduction of sentimental sciolism into jurisprudence that during the past few years the public conscience has been periodically shocked by the successful attempts to prove to the satisfaction

of juries, that heinous crimes are imputable less to depravity than to organization, and their perpetrators consequently irresponsible before the law. The problem of criminal responsibility is thus solved by a formula which is true only so far as it is sustained by physical evidence of defective organization; and which, on the other hand, is wholly undemonstrable, and therefore practically untrue, so far as it assumes physical deterioration, or in a single word, disease, from the presence alone of moral depravity. We hardly think it will be denied that, at this moment, there are as many healthy, robust, and frolicsome natures among villains in this world, as there are to be found among virtuous men, for physical health and moral rectitude are not convertible terms, nor contrariwise, since if this were so, half the scholars and professional men in our country would be deemed irresponsible agents, unfit to handle their property, and unsafe to themselves or the community to be left at large.

This plea of moral insanity under which so many acquittals have, in past years, been obtained, is one of such logical absurdity that the wonder is, not that counsel should have used it, as they would any technicality which might enure to the benefit of their client, but that courts, supposed to represent that embodiment of reason of which the law is the essence, should have acquiesced in it to the extent of charging juries that it was an acceptable defence. Divested of all extraneous conditions, moral insanity when presented as an extenuation for crime means simply this, that an individual, in the enjoyment of perfect intellectual health, and with no demonstrable obscuration of any mental faculty, may yet be such a moral idiot as not to know right from wrong—not to be able to control himself, and not to be able to be affected, as all other intellectual beings

are, by those primary and necessary beliefs which are the seeds of moral obligation. Now if such a human being ever existed, or could exist, he would present the paradoxical character of a man who, while enjoying all the possibilities of a perfect intellect, had yet no knowledge or conception of his own identity, since identity, as Descartes' proposition long ago established it, is a question of feeling, not of intelligence, and such a man could have no affections or passions, for pure intellect is passionless. Therefore, being unable to distinguish between right and wrong, he could not feel that it was wrong for an individual to injure him in his property, health, reputation, or domestic relations. Instead of revenging or redressing, as it is called, by a strained courtesy, such wrongs, a line of conduct springing from indignation at the violation of right thus done him, he must be supposed not to have any feeling or sense of moral aversion about it, although his unclouded intellect might correctly apprehend all that had transpired. Those virtuous moral lunatics, Sickles, Cole, and McFarland, seem to have had just enough moral perception left them to discover that they had been cruelly wronged, but not enough moral discernment to perceive that they wronged their victims in slaying them. In the admitted enjoyment of perfect mental sanity they deliberated upon their wrongs precisely as do men who desire to revenge themselves. Instead of being impassive and indifferent to wrong as any consistent moral lunatic should be, they "nursed their wrath to keep it warm," conned over day by day the great tragedy by which they were to raise themselves to the bad eminence of murderers, and when they had screwed up their courage to the executive point, all shot their victims in so cowardly a way as to show that they did not intend to expose their

own lives to any risk. Now when real lunatics are carried away by a homicidal impulse, they are not particular or pre-visional as to what may happen to them. They rush blindly at their victim, sometimes also including others whom they had, if we may trust their statements, no thought of killing. Like the hashish-crazed Malay, "they run amok and tilt at all they meet." Did Sickles, Cole, McFarland, or more lately, Mrs. Fair present any such delusion as leads to homicide in the true maniac? Had courts only recognized the inseparable physical conditions which cluster about such a plea, and duly weighed the self-contradictory proofs upon which it rests, or the illogical conclusions to which it leads, they would never have given it the sanction of a judicial endorsement.

It is idle to say that the progress of modern science either justifies the hypothesis of a moral insanity, or will aid us in finally establishing it. Transcendent as have been, and still are, the labors of such men as Bernard, Spencer, Tyndall, Darwin, and Huxley, they have never been irrational enough to assume, have never sought for proofs to justify the assertion, and have never intimated in their wildest speculation the idea that human nature had changed its essential constituents since the day of its creation. Physicians and philosophers, from Galen and Aristotle, to Carpenter and Sir William Hamilton, have always expounded man as a being exhibiting a moral and an intellectual nature of undisseverable connection; and while education may give an overshadowing preponderance to the outward manifestations of one or the other of these dual endowments, it is impossible to entirely extinguish the one without entirely extinguishing the other. No one ever saw a perfect intellectual being who did not know or feel when he was robbed, or assaulted, or slandered, that he

was wronged. Even the lower animals have something akin to a moral sense, and distinct from intelligence. The dog licks the hand that has smitten him, and the male of his species, however ferocious, never attacks the female. Is this intelligence alone? If Messrs. Sickles, Cole, or McFarland were wronged to-day, they would know it; why? Because, as some one might say, they had recovered their moral sanity and sense of moral obligation. But when did they lose that sense? They all ascribed the commission of their crimes to an overpowering sense of virtuous indignation. Yet none of them saw their victims in the act of wronging them, and they could not even plead "heat of blood" in consequence. In what respect therefore did their acts, in legal contemplation, differ from premeditated revenge? Did the law whether of Divine or human enactment ever justify revenge? "Vengeance is mine, saith the Lord, I will repay." And in the celebrated McNaughton case which occurred in 1843, and gave rise to the most thorough discussion of the criminal responsibility of alleged lunatics upon a series of questions submitted by the House of Lords to the fifteen Judges, and intended to settle the law in England on this subject, the opinion of the Judges was "that notwithstanding the party committed a wrong act, while laboring under the idea that he was redressing a supposed grievance or injury, or under the impression of obtaining some public or private benefit, he was liable to punishment."*

The persons before named proceeded upon hearsay, to brood over what virtuous people consider to be a great personal wrong, and their self-justification was founded upon that quality of high sensitiveness to public respect which is the safeguard of every member of society, but which, also, can not consistently coexist with *moral* insanity. If a man does not know when

* 10 Cl: 1 Finn: 200: Vid: also 2 Den: C. C. 20.

he does wrong, he can not know when wrong is done to him. But they showed on the contrary the highest sensitiveness to wrong, for they could not bear even disgrace, and like Milton's fallen Archangel, they preferred to cherish

“the unconquerable will,
And study of revenge, immortal hate,
And courage never to submit or yield;”

a state of mind not unnatural to men who take the law in their own hands, regardless of consequences, but which, we submit, is entirely out of character with those who, willing to imitate the conduct of exasperable defiant people, yet seek to avoid the penalty belonging to it by taking refuge under the shadow of a cowardly plea. The law is so tender in her adjudications upon human wrongs, as to weigh with the most generous consideration all the mitigating circumstances in the history of crime, and to make it unnecessary, therefore, that anything absurd or impossible should be evoked in its extenuation.

The idea of moral insanity is the offspring of a kind-hearted physician who, living amid the terrors of the French Revolution, and witnessing the undertow of blood which accompanied this age of reason, supposed he had received a new revelation relating to man's mental nature as separated from his moral responsibility. Because, forsooth, he saw the most glaring exhibitions of total depravity in the persons of men of genius, and witnessed the burial of religion in the sty of sensualism, he hastily imagined that this national efflorescence of immorality proved the possibility of an entire loss of man's moral nature and responsibility, while still enjoying an undimmed intellect. Looking at it as an alienist physician, merely, he styled it a dis-

ease, a form of insanity, judging it from the enormity of its outward manifestations, yet compelled to qualify it in the same breath by an expression certifying that it exhibited no mental obscuration; in a word, no delirium. And as among his patients, the habitual contemplation of a state of society oscillating between Atheism, blood-shed and general anarchy must have tended to impress a preponderance of moral instability in them in common with their fellow-citizens, it is no wonder that he, whose life was one of exceptional quiet and purity should have charitably explained depravity in his wards as disease, and failing to find intellect correspondingly impaired should have assumed the presence of disease where he saw the most perversion in morality.

But if this palpable solecism in physics, no less than in morals, had been received, as it deserved, by courts, it would never have climbed to the dignity of a precedent, nor been allowed to captivate those fresh victims who are too indolent to investigate the shallow authority upon which it rests.

It may be courteous, and at times convenient, to find another name for depravity, by calling it disease; but it is never just to the party himself to divest his mind of the idea of responsibility by teaching him the antinomian doctrine, that he was insane because he sinned. The writer of this article was sent last year by the Governor of a neighboring State, to determine, as a Commissioner on lunacy, whether a young man convicted of a double homicide, and under sentence of death, was or was not, insane. The drama of a young life, well endowed in intellect and health, and with possibilities of a high order, and yet whose moral nature had been debased to the lowest degree by self-indulgence, was about to close in ignominy upon the gallows. But sad as was that

prospect, then within a few hours of its fulfillment, it was far transcended in sadness by the defiant and impenitent frame of mind in which we found him. He felt indignant at the plea of insanity raised in his behalf, as well he might, since no sufficient evidence of such a condition was produced either upon his trial, or subsequently. Notwithstanding which, his counsel had been guilty of the cold-blooded casuistry of indoctrinating his mind with the idea, that while perfectly sane before, and immediately after the commission of his crime, he must have been *insane* during the act, because he committed it. Therefore he put this very trenchant question to us: "Knowing myself to have been sane before and after killing those two persons, and knowing too, that I should probably be punished for it, do you think I could have been sane while committing the act? Would not common sense have prevented me from doing that which would surely bring me to this end?" And, continuing further, he said, "My counsel tells me that in the cases of Sickles, Cole, and McFarland, the Court held that a man might suddenly lose his reason while committing a crime, and as suddenly recover it. Now why may that not have been so in my case?" And this young man went down to the grave morally poisoned by that shallow casuistry which had been so imprudently breathed into his ear.

It is not our province to moralize upon the duties of lawyers to their clients. But in relation to courts, the public have a right to criticise their judgments whenever those judgments are seen to be in plain contravention of sound morality and public safety. It was not a Christian who exclaimed, "What are laws without morals?" but a Roman orator and a heathen; yet one who, in all his innumerable pleadings, and with all his superior excellency in Greek sophistry, never ventured

so far as to call sin and depravity by the modern names of disease or moral insanity. And it is noteworthy in this connection, that those cases of moral insanity figuring in the annals of our jurisprudence as precedents, have almost invariably occurred in courts whose judges were notoriously inferior to the counsel practicing before them; and who, consequently, were overpowered by them, and afraid to cross swords in the field of dialectics or legal criticism. This pitiable spectacle has too often been witnessed to require any description of it at our hands. But, and until public opinion, supported as it may be by the judgment of the best informed scientists, shall repudiate the plea of moral insanity as a gross delusion, born in the bosom of casuistry and nursed in the cradle of ignorance, as mere sophistry in fact for the special convenience of great moral outlaws; until this stronghold of public sentiment, on which the law ultimately rests, shall purge itself of all dalliance with the above pernicious doctrine, we shall continue to see it advance from court to court, spreading like a moral contagion over the land, until murder shall in truth, and not in imagery alone, be converted into one of the fine arts. Then, the only infamy attached to crime will spring from its insignificance, and the only certainty of its impunity will rest upon its enormity. We ask Christian men to ponder well these things before they allow themselves to be deluded by that *ignis fatuus* plea, which has no foundation in fact, no limits in application, and may be stretched to such a degree as to destroy every principle of natural equity which binds society as a whole. Nay, more even than this; for if moral insanity and irresponsibility may co-exist with perfect mental health, then God's moral government of the universe becomes impeachable as a despotism; since while it professes to allow men to do as

they please, it punishes them if they please to do wrong; and all men being sinners to some degree, and therefore morally insane, ought, under this plea, to become the less responsible in proportion as they are the more sinful.

MANIA TRANSITORIA.

A very natural corollary to, and legitimate offspring of moral mania is that form of impulsive insanity, recently designated as *mania transitoria*. If the former, disparting as it does in a *physical* way our mental constitution into two separable entities, and assuming absolute moral insanity alongside of absolute mental sanity, may be considered an illogical, and therefore contradictory conclusion to the premisses upon which every system of civil or religious accountability rests, the latter must be admitted to be a conclusion without a premiss, an edifice standing upon air, and a species of psychological soap-bubble which bursts not only when philosophically handled, but by its own expansion.

Ordinarily, all diseases show some relations to past or present physical states, and also leave behind them some evidence, however fleeting, of their occurrence. They have *prodromata* and *sequelæ*. But Nature changes *all* her laws in the case of *mania transitoria*. We are asked to call it a disease and at the same time are not permitted to apply to it any of the accepted and ordinary tests of disease. If we ask to what *class* it belongs, we are told to none. It is not a mental obscuration, because there is no incoherence, no delirium —no offuscation. The end and aim of the disease being homicidal, it goes straight to its purpose and then stops. It is not an ordinary and vulgar nervous malady, because that has stages, this has none. It is not an inflammation of the brain or cord, because this has

definite symptoms, impressing themselves upon the pulse, muscular coördination, &c. If we ask how long it lasts, we are told sometimes but a minute, sometimes only long enough to fire a pistol or give a stab, at all events, never but a very short time, because, if it showed itself before the act of violence, or continued an hour, or day after, it would not be *mania transitoria*, but instead, would constitute that common insanity which finds its way very properly into Asylums.

Whence it follows that in order to be recognized, it must be seen only by those who are specially endowed with the faculty of introspecting the minds of others divinely, and telling us at a glance whether a summer cloud is forming upon it, a thunder-shower passing over it, or whether a cyclone is overthrowing the elemental processes of idealization, while to all other persons but this clairvoyant expert, the object of this scrutiny is, in looks, conduct, speech, and in fact, as sane as his microscopic investigator. Truly such a power of reading the human interior as that, is, to say the least, *quasi-Divine*. *Felix qui potuit rerum cognoscere causas.*

Again, the *mise en scène* of this disease is always tragic, in fact it is nothing unless dramatic, and the teleological purpose of its manifestation is painfully uniform, being always homicidal, and most generally on an obvious basis of revenge. Other manias disport themselves through various phases of mental aberration, physical misconduct, or moral delinquency, but in all the American cases, constituting causes *célèbres* in our criminal jurisprudence, such as those of Sickles, McFarland, Cole, Andrews, and Pierce, the crime was not simply homicidal, but with all such aggravating circumstances as showed revenge for injuries to the *feelings* (not the person,) coupled with protracted determination to redress these wrongs. They were neither cases

of *chance-medley* nor *irresistible impulse*, for each revolved the incidents of the drama deliberately, and executed it when the most convenient time to him, and the most defenceless to his victim, had arrived. In what single element does this differ from premeditation?

Granting the fact that the insane do premeditate, it is still admitted that no recognizable symptoms of insanity were exhibited by the above parties either previous, or subsequent to the commission of their crimes. In order to explain their mental condition at that time, we are told that a certain parenthetic phase of insanity suddenly sandwiched itself between the otherwise sane operations of their minds, and they became *instantaneous lunatics*.

Do the gentlemen who promulgate such theories before courts, as the last discoveries of progressive science, appreciate the logical dilemma between whose horns they have placed themselves? If they can not show material symptoms for a material disease, will they consent to ride one horn of the dilemma on the saddle of *demoniacal possession*? What else is left them but this? Or if they prefer, will they invoke special providence in retribution? *Quem Deus vult perdere prius dementat?* This flash of lightning form of insanity, heralded by no symptoms, rushing meteorically into one's mental atmosphere, and exploding violently, yet leaving no wreck even of its subject behind; being all-in-all to itself, self-created, self-existent, self-curing, self-limited, and above all physical laws, has it any analogue among finite things on the earth, in the air, or in the waters under the earth? Can it be made the object of legal evidence, when no one knows *where* or *when* to look for it? Let us see.

It is a recognized principle in the law of evidence that an *expert*, in matters involving special knowledge,

is one instructed by experience; and it is also as well understood, that experience means knowledge obtained by *repeated* observation. Hearsay, or a casual and unconfirmed case, are not sufficient to constitute an expert *quoad hoc*. It is the law of general averages which determines the difference between an experienced and an in-experienced scientist. Has he seen many cases, or in a word, has he seen enough to form a differential judgment upon the mere resemblance, or the physical identity between them? If not, he is *in*-experienced and to that extent, no expert. This doctrine was fully affirmed in what may be considered a leading decision in expert testimony, by the Supreme Judicial Court of Massachusetts,* where it was held that a physician who has been in practice for several years, but who has had no experience as to the effects of illuminating gas upon the health when breathed, can not be allowed to testify in relation thereto as an expert. And experience, in attending upon other persons who, it is alleged, were made sick by breathing gas from the same leak, is insufficient for this purpose. Under this ruling let us now inquire who, as experts, are competent to testify to the existence of a special form of insanity known as *mania transitoria*, and which disease bears no relation to ordinary insanity, being unheralded, sudden, instantaneous and evanescent.

Dr. Edward Jarvis, in a paper on Mania Transitoria, contributed to THE AMERICAN JOURNAL OF INSANITY for July 1869, and suggested by the trial of Andrews, in Massachusetts in 1868, on whose defence he had appeared as an expert, furnishes a history of this mysterious malady, but without that one chapter which would have imparted to it a scientific value, the chapter of his own clinical experience. He quotes extensively from

* Emerson v. Lowell Gas Light Co.; 6 Allen, p. 146.

foreign authors, and also from Dr. Ray, but omits to give us any cases of his own, either to confirm the sources of his judgment that there is such a disease as *mania transitoria*, or to enable us to receive testimony thereto from a living observer. It does not appear in evidence that he knows the disease by experience, nor to that extent required by law to constitute him an expert upon it. And with all his wide knowledge of insanity, extending through nearly forty years, he may be considered as explaining this omission indirectly, where he says, in the article above quoted, that, "Some psychologists of large experience have met none." Dr. Bell, at the trial of Rogers, after stating that he had had upwards of a thousand patients under his charge, said: "I have heard of many cases where the disease was only transitory, from Dr. Woodward and others, though I am not familiar with cases of such short duration under my own observation." Dr. Choate said that he had had "charge of between three and four thousand patients at the Taunton Hospital in the course of fifteen years, and in that time he had not seen any such case."

In like manner, Dr. Ray, whose work has long been accepted as an authority before courts, although detailing at large the physiognomy of the various shades of insanity, and quoting extensively from foreign authors, omits to give us the details of cases coming within his clinical observation. We are left therefore, in the cases both of Drs. Jarvis and Ray, to hearsay testimony collected by them from foreign sources, and not even corroborated by their own experience. We submit that this is not *prima facie* evidence in support of the fact in issue, nor even the kind which the nature, and essentials of expert testimony require. We might even go further and say with Prof. Wharton,* that "the alleged

* Medical Jurisprud., Vol. 1, § 719: 3d Ed., Phila., 1873.

cases are either imperfectly reported, or exhibit proofs of permanent mental lesion." This last clause in fact furnishes the key to the whole riddle of *mania transitoria*, even under the arguments in favor of its disconnection from insanity furnished by Drs. Jarvis and Ray. The parties described were already lunatics, drifting into more and more pronounced stages of insanity, *but*, did they after the acts of crime committed by them immediately recover their mental sanity, like Sickles, Cole, McFarland or Pierce? The story of Drs. Jarvis and Ray's cases ceases with the outbreak of violence. Is this *complete* evidence? We think not.

But why assume a special disease to explain acts which are of daily occurrence among the insane? Do not epileptics often have sudden tendencies to violence, developed in the course of a seizure? Dr. Jarvis tells us, in the same article, (page 23,) that "an epileptic patient under my care was disposed to fight, in his sudden outbreaks." Do not all experts agree, the world over, that epileptics are irresponsible for the acts committed by them during a convulsion? And the best test of that irresponsibility is the fact that the real epileptic never remembers after awaking from the sleep following a paroxysm, the occurrences that accompanied it. He is in truth insane during the seizure, and that period forms a blank in his memory. But, here the parallel ends between him and the transitory maniac, for the latter restores himself to sanity by an act of violence, and remembers all its incidents, while in the epileptic, the disease is confirmed the more strongly by every repetition of its paroxysms.

Again, an attack of acute delirium may occur in an insane person previously quiet. Why may not this be the true explanation of *mania transitoria*. But the parallel fails again, because its advocates insist that the

subject of it must have been indubitably sane before, and after the act, and only insane by parenthetic interjection of mania, for a few moments, into his mental constitution, which immediately upon his gratifying his thirst for blood, shakes off the overshadowing duress. It is a pleasant thing indeed in this world of suffering, when a patient can cure himself by simply gratifying his wishes *ad libitum*. But it is quite a different thing when that gratification involves destroying a human being, and constituting one's self the judge and avenger of one's own personal injuries—that indeed, in the quaint language of Lord Bacon, “putteth the law out of office;” and society owes it to itself by this general assault upon its prerogative, to hunt the avenger down as an outlaw.

From the outset, we have avoided discussing the two subjects of moral insanity, and mania transitoria in the field of medicine. For, as elsewhere stated, its advocates have removed it entirely from the reach of those physical laws to which all natural phenomena are amenable, and under whose operations physiology and pathology aided by chemistry, are able to follow the career of disease wherever matter exists, and to register, with daily increasing precision the progressive effects of organic lesions. They have carried us, however, into a field equally unfortunate for their cause since it is one where inquiry, resting upon rules of logic and principles of legal evidence, enables us to determine exactly the *πον-στω* of their theory, and that we find to rest on assumptions and not facts. In law this is not sufficient ground on which to posit a judgment nor even a presumption, because in either case some evidence of probability as well as possibility must exist in its behalf. Even an inconclusive presumption must rest upon general experience, or upon proof of the existence of

certain other facts. Hence the certainty of a fact always depends upon the certainty of the things by which it is sought to be established, and the latter must at least be probable, for, as is well said in the language of the Roman Law, "presumptions are conjectures from probable proof, assumed for purposes of evidence,"* and again, it is another well received maxim by our Courts that "presumptions arise from what generally happens."†

Now there is no possibility, and consequently no probability that a disease belonging to a finite body can constitute itself into a miracle, being in all its manifestations contrary to the law of nature as operating in multitudes, *particularly* when the preponderance of testimony from those specially circumstanced to observe thousands of the insane, agrees with the habitual manifestations of that same nature to whose laws *mania transitoria* is a contradiction. Thence arises the question of whether it is more likely that the few cases of so-called *mania transitoria* were correctly interpreted, thus convicting the majority of psychologists of want of progressive knowledge in diagnosis, or whether the few who assume the existence of this alleged disease have applied the common rules of evidence in forming their judgment. Assuming equal skill on both sides, it seems obvious that those alleging contradictions in nature, are bound to sustain them by proofs that are reducible to demonstration, for hypothesis is only the ante-chamber to argument, the glove thrown down in the arena of debate, and the law can not rest upon it in determining human responsibility. Consequently those who build judgments upon established facts, capable of infinite re-affirmation, must be considered as

* Pand. : lib. 22: tit. 3, n. 14, Voet. ad.

† 22 Wend. : 425, 475.

the most reliable exponents of things as they are, and the true "ministers and interpreters of nature," for it is a maxim in jurisprudence that *natura non facit saltum, ita nec lex.*

Our objections to the recognition of any such doctrines as those of moral insanity and mania transitoria, may be summed up in a few propositions, which we believe to be founded in morality and justice; in morality, as defining our responsibilities to God, and in justice, as defining His bounty to us, and our duty to our fellow-men.

As to *moral insanity*, we object to it because it enslaves man to a physical fate from which he can not escape, and whose commands he must obey—consequently being either vicious or virtuous by compulsion, he is worthy neither of praise, nor of blame, and in fact is only an automaton. In other words, this doctrine denies to man what God has given him as a special right, the liberty of choosing between two courses of conduct, with the power of exercising that choice when in mental health. Mental health is the only test that God or the law apply in determining human responsibility. A man, therefore, has the liberty to be as vicious as he pleases, and we have no right to stigmatize him as insane because he prefers that course of life. It is his prerogative to choose, without which he is no man, and not a responsible agent. "Choose you this day whom ye will serve," is the significant language of the prophet Joshua, uttered no less as an invitation than as a command, but in either case testifying to the liberty of conscience and conduct granted by the Creator to all men.

As to *mania transitoria*, we object to it because, it is a hypothesis and nothing more, and an assumption not sustained by facts. It borrows the name of a disease, but refuses to bear the features of one, or to sub-

mit itself to be tested by the only rules which science recognizes as legitimate. Invoking scientific recognition, it denies the conclusions by which science condemns it under the light of experience, and asserts itself as superior to the necessity of logical demonstration. It starts with an assumption, ends in an assumption, and is only an inference throughout, from an unsupported hypothesis. Its tendency being simply to emancipate crime from penal obligation, it is a plea whose admission in court is against scientific truth and public policy, against divine and human justice, and against the sovereignty of man's moral nature.

Lastly we object to both, because coming from physicians, it is an attempt to set back the clock of the century, and to revert to superstition and super-naturalism in medicine. It is an attempt to curtain the windows of that science whose religious duty it is to cast light and not mysticism around disease—to treat it not as a personal devil and an entity to be exorcised by philters and mummery, but rather as the perversion of a natural state struggling to restore itself to an original equilibrium.

CRIMINAL RESPONSIBILITY OF EPILEPTICS, AS ILLUSTRATED BY THE CASE OF DAVID MONTGOMERY.

BY M. G. ECHEVERRIA, M. D.

The cardinal points in treating epileptic insanity are to acquire a knowledge of its true nature, and then to establish the mode in which the mental condition of the individual is perverted or affected by its paroxysms. Alienists of eminent ability have considered this question, and many essays have been already published on the subject. It may, therefore, be asked, why should this one be presented? Because the medico-legal enquiries concerning the responsibility of epileptics are still conducted in a manner very different from that in which they should be, as is illustrated by the case here examined. Those who have more confidence in speculative reasoning than in facts, fancy that the moral perversion, the extreme morbid susceptibility with which the character of epileptics is so deeply stamped, has no necessary relation to their dreadful malady. Consequently, theories suitable to the interest of the party who calls them, and often based on distorted scientific principles, are presented by medical witnesses in the most unhesitating manner, and suffered to influence the decisions of Courts of Justice, even though these witnesses, with equal assurance and self-sufficiency, declare their want of practical experience with epilepsy or insanity, while not hesitating to advance expert opinions on the legal accountability of epileptics and their mental state. In other words, as

Professor Ordronaux so truthfully says in his excellent work "On the Jurisprudence of Insanity," (p. 165,) "The effects of disease upon mental capacity are wholly ignored or repudiated when an expert in mental capacity is summoned to testify, but completely recognized and admitted where physicians and nurses, who are not experts, are called as witnesses. This may pass for metaphysics, but it certainly is not law, since it violates both reason and justice, and ignores the essential element of experience which constitutes a skilled witness." Let us, however, hope that the enlightened justice of our legislators will so appreciate the existing evil as to determine upon wiser and more equitable laws concerning the standard of qualifications of experts in insanity, and the manner in which their testimony should be given in order to aid the judgment of juries.

David Montgomery, a cartman, now twenty-one years of age, was indicted for killing his wife on the morning of the 13th of November, 1870. He inflicted upon the left side of her head, a penetrating wound with an axe, from which she died on the following day. The crime was committed in the city of Rochester, N. Y., where the trial took place, on the 17th of May, 1871, in the Court of Oyer and Terminer. I will here present an abstract of the leading facts in evidence as transcribed in the certified record of the trial.

Hereditary predisposition to insanity exists in the highest degree in David Montgomery. His father suffers from a rush of blood to the head, and dizziness, which "makes him lean against the fence when it occurs." His paternal great-grandfather and grandfather, and his uncles, in the same line, have been affected with "a rush of blood to the head which makes them fall." A paternal uncle and his sister died insane; a

brother of his paternal grand-mother died insane in the Lunatic Asylum at Berwick-on-Tweed. One of his father's brothers is insane, and in the Asylum at Rochester, Monroe County, and finally, his mother died paralyzed. David Montgomery was born with a large head, so large, that the midwife thought he was affected with "water in the brain." He was subject during his infancy and childhood to diurnal and nocturnal characteristic epileptic fits, and from that age was habitually spoken of and regarded by his family as disordered in mind; they called him "crazy" or "Daft Davy." He has besides been troubled since his infancy with a discharge from the right ear, and headache. When eight years old he fell from a peddler's wagon, apparently in an epileptic fit, and was taken up insensible, with a wound on the left side of the head, about half an inch long. He received another severe injury of the head, three or four years ago, while he was drawing gravel, on the same side where he had been cut previously, and was confined to bed five days. He had had nocturnal fits, spots of blood having been observed several times on his pillow. He has beaten the wall on frequent occasions in the night time, saying "these imps can't keep making faces at me, and me not do anything to them;" he would get out of bed and be standing up, on occasions of this kind, or would strike his brother with whom he slept. Being subject to frequent and violent headache, when fifteen or sixteen years of age, on one occasion while thus suffering he was in his father's house exclaiming: "God was above me once, but I am above him now, why are you blind?" and then struck his father, but on the following day had no recollection of the matter. About that same time he was found, at sunrise, in an alley beside the house, lying under a wagon with a Newfoundland dog, and apparently not

knowing how he had come there. At the age of eighteen Montgomery was married to a vile, dissolute woman. How he was led into such an unfortunate marriage does not appear in evidence; he was a hard working, industrious boy, attended a Methodist Sunday School, and his father, who kept a store for years, says that he never saw him drink spirits; no evidence whatever indicates that he was intemperate. In the fall of 1870, while in conversation with Joseph H. Duncalf, three days after his wife had left him, he was in great grief, and Duncalf, to change the subject, asked him about a horse which he had sold him. Montgomery replied that—he was the strongest horse he ever owned, and then proposed to pull up a post that all the men in the house could not pull up. He threw his arms around the post and pulled it with all his might; his face looked red, and his eyes large, then he walked away. In October, 1870, he could not sleep at times, and was once seen by Catharine Donovan in great mental agony, crying and sobbing in the most lamentable manner. He would get up late at night to go to the barn, and when Catharine Donovan would ask him "what was the matter with him," he said that he could not sleep with the headache, and that he might as well be up as in bed. On different occasions, while watering the horses, his brother Robert saw him drop the pail, with his mouth and arms twitching, or again saw him looking for a currycomb or brush, when he had it in his hand, and talk to himself entirely unconscious of what he was doing. One of his neighbors saw him in the open street driving his horse and cart up to the sidewalk, laughing, crying, wringing his hands and rubbing his forehead. About this same time, after speaking to his brother Andrew about the baby and its mother, he appeared to get wild and ex-

cited ; thereupon he leaned over a gate, which was near by, and said to his brother, "you think uncle Dave is strong, don't you?" "Yes," replied the brother, and he answered, "He is not half so strong as me," and taking hold of a post, he lifted it as hard as he could until his face was perfectly red. He then held out his hands exclaiming: "There, do you see that, did you think I was as strong as that; I could lift the corner of the house as well."

On Monday evening, before the homicide, he came into his father's barn, bare headed, and rubbing his hands, he told his father to repeat the Lord's prayer "quick," "quick," which he commenced himself, and repeated two or three times in an unintelligible manner. The next day, Tuesday, in the forenoon, he had an epileptic fit, as testified to by his father and Catharine Cuthbert. He became very much distressed on Thursday night, believing himself chased by five men and the devil ; he then wanted his father and one of his brothers to go out with him, which they did to quiet him. On Friday afternoon, while in his cart, he had a fit, his head was leaning back, he was licking his lips, mumbling, muttering to himself, and rubbing his head. A lady having engaged him at this moment to move her trunks, asked him how much he charged ; he said "two dollars," but she was willing to pay only one dollar, and he replied, that he would do it. His wife and mother-in-law then came to the cart : he was apparently asleep, his wife shook him, and asked him if he had been up the night previous. He opened his eyes wildly, and she asked him if he would go down that night, and he said—yes. Thereupon they went off ; he returned to his former position, and Philip Bachs, who testifies to these facts, stepped up and remarked to him that it was time to go after the lady's trunk, and that

if he did not go, he (Bachs) would go. "Montgomery jumped up, hit his mare a cut, and drove up the street," but came back again inquiring: "Bachs, who was that woman, and where in h—l am I to go?"

On Saturday morning—eve of the homicide—his father saw him bring the horse out of the barn, about seven o'clock, hitch him to the cart, then unhitch him, take him to the barn, and let him stand there five minutes; he also saw him walk around the cart, rubbing his hands, before bringing back the horse to hitch him up again, without answering his father or taking notice of what he remarked when he told him the second time not to put the horse to the cart, that he had better leave him in the barn. About four or five o'clock in the afternoon he spoke in a senseless manner upon different things; between seven and eight o'clock in the evening he became as wild as his father ever saw him. He then came in and told his father that, there was a man outdoors who wanted to see him; he turned, wheeled around and went out. About eight o'clock he still labored under delusions; he then asked Robert Y. Duncalf to stay all night with him, saying that he was alone; he looked wild at the time, more so than he did at noon, when he was particularly noticed also by Duncalf. While making the above request he stood at the door of the barn, where he kept his horse. On this very day, David Montgomery was met in the forenoon by Wm. White, his wife's uncle, whom he told that he had divided with his wife and taken the baby, nine months old, to his father's house. White reproached Montgomery for his conduct, and asked him if he could carry the baby to its mother. Montgomery at first refused, but afterwards said, "I don't care." Upon White's invitation, Montgomery accompanied him to see his wife. She received them, and without much

argument consented to go back to Montgomery if he would move from where he lived, which he agreed to do. They dined together, and in the afternoon White and Montgomery went to sell some chickens. Towards evening Montgomery spoke and said, "If she ever comes back to live with me again she'll never leave me." They met a boy, brother of Montgomery's wife, who told his uncle that he had got the baby down at his sister's. Montgomery naturally, and without anger, said to him, "I shall whip you for stealing my baby." The boy replied: "You told me I might bring it down and uncle told me so," and Montgomery remarked, "If I did not talk I should not say anything." White and Montgomery separated about dark, the latter going, as he then stated, to take care of his horse. Between eight and nine o'clock in the evening Montgomery returned to his wife; she was absent then, but came in about nine o'clock. They talked together and she sat on his knee. When he got ready to go home, at about half-past eleven, he said, "Come, Mary, let's go home." She replied, "Let's all stay here to-night, and we'll make up an extra bed on the floor." "I ain't took care of my horse yet, and I would go ten miles to take care of my horse." Then she said, "Uncle, you go home with him," but Montgomery answered, "No; I want you should go, and then come up to-morrow morning." White advised his niece to go home with her husband, and offered to come up in the morning. Thereupon Montgomery, his wife and the baby, carried by the former, went home, according to White's testimony, who parted with them thinking "it was all peace and harmony" between them.

No evidence disproves the testimony of Montgomery's father and Christine Cuthbert, showing that David Montgomery took the ax to split up some wood on the

Thursday night previous to the homicide, between one and two o'clock, and did not return it to his father's house. There is no evidence beyond Montgomery's own statement, any more entitled to faith than are his delusions, touching his real mental condition, or indeed what occurred on the night of Saturday, when he, though he had been kept awake for several nights, did not "sleep a wink," and must have been necessarily enveloped in the clouds of mental disorder attending the undeniably repeated epileptic attacks he had experienced throughout the week. Nor is there any proof of his having quarrelled with his wife after they retired "in peace and harmony," whereas it is manifest that she was sound asleep when he struck her, and Montgomery, as it may be seen hereafter, further acknowledges that they had sexual intercourse during the night.

Montgomery made no attempt to conceal his crime, or the murderous weapon. After inflicting the mortal blow upon his wife's head, he rushed out to the barn with a razor, pursued by a brother, who happened to see him, and afterwards by his father, to whom he declares that he has killed his wife and wants to kill himself, and, in their struggle to prevent it, he inflicted slight cuts on his throat. Then, upon his father's direction, he went with his brother to the police office, muttering and rubbing his head. On the way he encountered James Hunter, to whom he owed some money for feed, and being asked by him where he was going, he answered nothing but, "My father will pay you." At the Police Station he said that "his wife would be a whore, and that he would rather see her dead than to be one, and for that reason he struck her." He asked besides to be allowed to attend her funeral.

The testimony of the chaplain to the jail, the Rev. Thayer H. Colding, is most important. He saw Mont-

gomery a few hours after the homicide, between eleven and twelve in the morning, and he describes his appearance as follows :

"He was an entire stranger to me. I never had seen him to notice him from any other man. He was pointed out to me as a man who had killed his wife. I went to the bed and spoke to him, and he raised a little and did not regard me much. I thought I would speak, and put my hands on his head and spoke to him very kindly, and he looked up at me. I asked some other questions to call him out, and before this time I placed both hands upon his head. I saw his head was in a terrible excited state, and appeared livid. I kept both hands on his head, and asked questions until he answered, and I spoke about the unfortunate condition he was in, and after a little while he began to relate what had taken place, and began to talk a little more freely, as I asked him, and told me the incidents. He commenced the story where he had the ax in his hand, and said that he struck her with it. I remonstrated with him, and he said it was because he loved her so well. In answer to the question why he struck her, he said, 'Why, because I loved her so well.' 'And after I struck her, I stooped down and kissed her.' I asked, 'It was not because you hated her?' 'No.' I asked why he struck her, and he said because she had run with other men, and he had spent that night in trying to get her to live with him, and she said she would not live with him, or any single man. He said he couldn't live unless she lived with him. He then told me some of the history of it, and how he had been kept awake, and had not slept for several nights, and that night not a wink did he sleep. He said : 'I loved her so well I could not live without her, and all I want is, that they will let me go to the grave with her, and come back and hang me.' I said : 'How could you strike her with the ax?' He said : 'I stood with the ax about five minutes looking at her, and seemed impelled to strike her, and though I did not want to, I had to strike the blow.'"

The above interview with the chaplain lasted from fifteen to twenty minutes. Montgomery appeared in a terrible state of excitement ; he seemed to be all on fire. Subsequent to this Sunday the chaplain has conversed familiarly with Montgomery, and has not at any

time been able to obtain any other information in respect to the incidents of the homicide. I may further add, that on Sunday morning, between eight and nine o'clock, Jerome Rogers, a police detective, had a conversation with Montgomery, after he was locked up, and asked how he came to kill his wife. Montgomery said, "My temper got the upper hand of me." He also said, that after striking her he threw the ax down and kissed her. That his father and brother prevented him from cutting his throat; that they advised him to give himself up; he remarked he could have gone to Canada, but that he would have been arrested some time; and the last he spoke was to ask if he would be allowed to go to the funeral. Finally, about three o'clock in the afternoon, John F. Rothgangle and Mr. Benjamin, of the *Rochester Express*, called to see Montgomery. He was lying on a couch, with his face down, apparently asleep. The jailor roused him up, and Rothgangle testifies:

"When he was roused, he turned up partially on his back. I asked if he knew me; he did not speak directly, neither did he say whether he knew me. I finally mentioned my name, and reached out my hand, and he spoke to me and shook hands. I finally spoke to him and said, 'Where are you' and said he, 'I don't know; will you tell me where I am?' I think I told him, 'You are in jail.' He then wanted to know why he was there. I didn't answer directly. I think Mr. Beckwith (the jailor) and Mr. Benjamin asked how long he had been there, and what his age was, and he said a thousand years. From that, I think Mr. Beckwith told him his wife was dead, or had been killed, and he wanted to know who killed her, and he turned to the wall and rapped and said: 'Go away from me, you have bothered me long enough.' I think he was rather flushed in the face."

The following is the report of the Commissioners appointed to enquire into the mental condition of David Montgomery:

"The undersigned, your Commission, appointed by the Honorable Court of Oyer and Terminer, held in the city of Rochester, February, 1871, hereby report that: they have examined David Montgomery, now under indictment for homicide, and held in the jail of Monroe county. From the evidence they have obtained, and from personal examination of said David Montgomery, they come to the following conclusions, to wit:

1st. That said Montgomery had infantile epilepsy, and that they have been able to hear of only three (3) convulsions since he was three years of age, viz.: one at seven years, one at eight years of age, and one on the Thursday preceding the homicide.

2d. They find that he had, on numerous occasions, exhibited the evidence of that form of epileptic attacks known as epileptic seizures, of *petit mal* and that at these times he exhibited maniacal excitement, with tendency to violence.

3d. They find on personal examination, from his physical and physiological condition, evidence of slight dementia.

4th. We desire to say that we believe the evidence of *petit mal*, and the peculiar physiognomy of dementia observed in him, to be evidence of a permanent epileptic condition.

5th. Our conviction of the permanence of this condition is strengthened by strong hereditary tendency to insanity, as proved by its existence in two uncles and an aunt, and still further removed, in a great uncle, who died insane.

E. M. MOORE, M. D.,
H. W. DEAN, M. D.,
JOHN P. GRAY, M. D.

I concur in the above statements and opinions, and conclusions.

GEO. COOK, M. D.

We, the undersigned, in the absence of the other Commissioners, deem proper to add, that in our opinion, John David Montgomery, with the exception of the slight dementia alluded to, is not in a condition of constant insanity.

E. M. MOORE,
H. W. DEAN.

It is proper to make a single remark on the addenda of Drs. Moore and Dean, in reference to the condition of insanity displayed by Montgomery. Dementia is a

consecutive or rather closing stage of mental disease generally, and, if in this case, as the report of the Commission shows, it is the consequence of a permanent epileptic condition, whether slight or profound, it must constitute a permanent insanity. Dementia is characterized by feebleness and the abolition, more or less marked, of the sensitive, intellectual and voluntary faculties, as Pinel and others describe it, the judgment becoming thereby necessarily impaired. This condition therefore is one of constant insanity, though capable of existing in every degree.

Drs. Gray, Cook and Moore testified at the trial, that, upon their personal examination of the prisoner, and the facts elicited by the different witnesses, they believed that Montgomery was insane at the moment he murdered his wife. The contrary opinion was supported by Drs. F. H. Montgomery, John F. Whitbeck and Wm. A. Hammond.

Dr. Montgomery declared, that he had not made a special study of the subject of insanity; had never had occasion to treat medically a single patient for insanity; and his experience of epilepsy had been very limited. He had never been consulted in regard to David Montgomery; although he may possibly have prescribed for him as a physician in his father's family.

As Dr. Montgomery, by his own admission was not an expert in insanity, it is not necessary to repeat his testimony or further refer to it.

Dr. John F. Whitbeck did not develop any new fact and concurred in all the views expressed by Dr. Montgomery.

To Dr. Hammond the credit is due of assuming in the Montgomery trial, for the first time in the records of American Medical Jurisprudence, the position of *amicus curiae*, to give his testimony both on behalf of

the prisoner and of the people. It is not in my province, nor is it my wish, to enter into the legal objections to the surprise which so unexpected a course caused to the prisoner's counsel. No more legitimate, or higher position could be taken by a medical expert than that which leaves the mind unbiased and free to establish impartially the scientific principles that will decide the fate of a human being, whilst there is no room for doubt that, in the trial of David Montgomery, the jury rendered their verdict of guilty of murder in the first degree, upon the testimony of Dr. Wm. A. Hammond, which, on account of its importance is here reproduced in full.

Hammond, Dr. William A., sworn for the defendant, and examined by Mr. Martindale.

Q. Are you a practicing physician and surgeon?

A. I have been for twenty-three years.

Q. Where are you at present engaged?

A. In the city of New York.

Q. Have you been subpœnaed here on the part of the people, or invited to come?

A. I have.

Q. Did you afterwards receive a request from me?

A. I received a request on the 12th of May, requesting me to come on behalf of the prisoner, and I replied by telegraph that I had been written to by the people.

Q. You have been present on the trial?

A. Since the opening of the defence.

Q. You have heard the description of the condition of the defendant since infancy?

A. I have.

Q. Give me your opinion of the attacks.

A. I am decidedly of the opinion that they were epileptic.

Q. State whether there is anything peculiar in the circulation or condition of the prisoner, as relating to epilepsy.

A. He had the peculiar turgid condition of the extremities which is met with in epilepsy sometimes, but which is not peculiar to the disease, and is not found in all cases.

Q. What do you find his pulse?

A. One hundred and ten.

Q. How does that compare with other symptoms?

A. It indicates some derangement of his health, but not necessarily any affection of the brain or nervous system, unless that is his habitual condition. I have known many persons whose pulse was over a hundred, not usually, and my own is nearly that.

Q. Have you examined his ear?

A. I examined it in conjunction with Dr. Cook.

Q. What did you see?

A. All that I could make out without a speculum is that there is a considerable moisture, and perhaps some pus about the tympanum, and some slight appearance of ulceration, but it was impossible to say what it was.

Q. Assume the existence of these epileptic convulsions from childhood, continuing down to Tuesday before the homicide; assume, also, affection of the ear with putrid discharge; assume that these conditions all occurred and existed in 1866; that there has been a continuance of severe headaches; that on one of these occasions he rises suddenly in the chair, walking back and forth, wringing his hands, exclaiming, "God was above me once, but I am above him now," and strikes his father a blow, and shortly after is unconscious of that act—state to me the mental condition of the man at the time these manifestations occurred.

A. At that time, admitting the truth of what you say, he must have been suffering from hallucination and delusion—that ought to have been entirely temporary and were entirely due to an epileptic seizure.

Q. Assuming that on a subsequent occasion he is seen turgid in the face and suddenly struggling to lift a post solidly imbedded in the ground—what, in your opinion, was his condition at that time?

A. That of itself would scarcely indicate anything unusual, unless I am more distinctly informed as to the manner of its occurrence. He may have said it in a state of playfulness. If it is a serious thing, and he believed it, it is another evidence of delusion.

Q. Of insanity?

A. Not necessarily—because all delusions do not indicate insanity.

Q. Taking all these things in connection with your examination, state his condition then?

A. I think he was then in a state of mental aberration.

Q. Assuming that on Monday night, before the homicide, when in a state of excitement and distress, he enters the barn where his father was, he tells his father to say the Lord's Prayer, quick, quick, and he is repeating it rapidly?

A. I make the same answer.

Q. Take the case of Thursday, where he came rushing into the father's house, saying he was pursued by five men and the devil?

A. The same.

Q. Is this conclusion assisted any by the facts that at this time he was suffering from great mental disturbance from adequate cause?

A. Yes, sir.

Q. Assuming these facts, state your opinion as to whether this prisoner is now suffering from cerebral disease.

A. I think he is.

Q. Do you recognize the fact, even with epilepsy, that a person may be insane, disassociated from epilepsy?

A. Yes, sir.

Q. Are these facts evidence of a condition of insanity, seizing a post solidly imbedded in the ground, and holding it out, as though it had been pulled up, and the other circumstances to which your attention has been called—Are these things all indications of insanity without epilepsy?

A. In the absence of any other possible cause, I should say, yes.

Q. Do you recognize the fact that when a person is suffering from cerebral disease, there are paroxysms of convulsions?

A. Yes, sir; but cerebral disease may exist without insanity.

Q. All these circumstances concurring, all preceding the homicide, in your opinion, was the prisoner sane or insane before the event of which I speak?

A. Before the homicide, I should think he was in a condition of permanent insanity. My idea is, that these delusions were the result of paroxysms of epilepsy, because I know that they very frequently lead to such manifestations. At each one of these periods of delusional excitement, it seemed he had suffered from a paroxysm of epilepsy, either of the *grand* or *petit mal*.

Q. State what proportion of epileptic cases are accompanied with insanity, so far as your observation extends?

A. With insanity, not many; very few—with obvious mental deterioration, fifty per cent. I do not suppose a man may have one attack, without his mind suffering more or less, but that would be very slight, and ordinary observers would not observe it. It is

possible for a man to have a thousand attacks and not affect him perceptibly to ordinary persons.

Q. What did the evidence of Bachs indicate?

A. That did not impress me as indicating much. I did not attach a great deal of importance to the ability of the witness to discriminate, and the prisoner not falling, would be decidedly against his having had an epileptic seizure.

Q. Might he have had an attack of *petit mal*?

A. It is possible, but not conclusive to my mind, that he did. The great difficulty is this, that if that man was a patient of mine, and I was inquiring into his mental condition, I would be able to question him, and not rely upon information from ignorant persons. I would not give an opinion from the evidence, as you state it, as to whether that was an epileptic seizure, to any patient of mine, upon any such statement as I heard this morning.

Q. Do you remember the statement of his condition at night, before the homicide?

A. Yes, sir.

Q. Of his weeping at noon, and his insisting on a man living eight miles distant, staying with him?

A. That is more to the point.

Q. Assuming the accuracy of that account, what does it indicate?

A. Without any further information, it indicates a condition of mental disease, or aberration.

Q. You have heard of his beating of the wall, and driving away the imps?

A. That indicates the existence of hallucination.

Q. That is insanity?

A. Not necessarily; hallucination does not become evidence of insanity unless the person accepts the reality of the hallucination, and acts in accordance therewith. A man may have the perception of figures on the wall, but does not believe it; he is no more insane than you. He may take that spittoon to be a rat; that is an illusion,—and he recognizes the falsity of it at once; but if he believes firmly and truly that he sees figures on the wall, or the spittoon is a rat, he is out of his mind, and insane.

Q. In the afternoon of Sunday, and after the homicide, he was in a condition beating at something like these spectres, what was his condition?

A. He probably had a delusion.

Q. Assuming the truth of these statements, is it your opinion that he had a delusion, and was insane?

A. Yes, sir; but these answers are given under the idea that the patient was not drunk, and had not taken opium, and was not suffering under mental disturbance. A man may tear his hair from mental disturbance, and not be insane.

Hammond, Dr. William A., recalled and examined by Mr. Peckham, testified on behalf of the people:

Q. Where do you reside?

A. In the city of New York.

Q. How long have you been a practicing physician?

A. Since the year 1848.

Q. Have you given any particular department of your profession a special study?

A. I have, ever since I began the practice, given disease of the mind and of the nervous system a particular study, especially during the last seven years.

Q. During that time you have had considerable experience in cases of epilepsy?

A. During the last seven years I have notes of over 360 cases of epilepsy which occurred in my practice. I have treated more cases than that, and before I had seen a great many cases.

Q. In regard to epilepsy, about what is the proportion of people who are affected with epilepsy, having their minds impaired to such a degree as to become insane?

A. I think Dr. Gray has placed the true proportion at ten per cent., but probably fifty per cent. develop mental deterioration, the mind weakened in some of its parts; it would require a very careful examination to detect it. In the cases of Julius Cæsar and Napoleon Bonaparte, and Mahomet, they had peculiar hallucinations. The existence of epilepsy is perfectly compatible with a high order of intellect in certain parts. I think I have seen cases where particular faculties of the mind have been really exalted by the occurrence of epilepsy.

Q. State what the disease is?

A. It is an affection of the brain and spinal cord which is characterized by loss of consciousness and spasms.

Q. There must be loss of consciousness?

A. Yes, sir, in a fully developed case; there are abortive forms in which there is a partial loss of consciousness, but no subsequent recollection of what has taken place. In the very mildest form of *petit mal* there are spasms, though not perceptible to the ordinary observer.

Q. What takes place during the moment is not remembered?

A. The very mildest form consists in loss of consciousness with vertigo, and a little fixedness of the eye, that lasts perhaps only an instant, when the individual, without falling or even losing the thread of his conversation, regains^s consciousness. A person may be walking in the street and does not lose a step. There is another form, embraced under the designation of *petit mal*, in which there is the loss of consciousness with slight spasms. Then there is another form, which is called the *grand mal*, which is generally preceded by a pallor on the face, an inarticulate cry, after that the person generally loses consciousness and falls as if struck, usually forward, striking the head; with that there is a fixedness of the muscles. The large muscles of the neck contract and press upon the jugular vein and that produces the discoloration of the face, which is the next symptom so far as color is concerned. With that occurrence of purple color, the fixed muscles relax and the person goes into convulsions, there is a twitching of the face, the tongue is forced between the teeth and bitten, and the urine and faeces are involuntarily passed; the bloody foam from the mouth is due to the biting of the tongue and the saliva. After that the patient usually passes into a condition of stupor. He may be aroused so as to give intelligible answers; after that he may return to his unconsciousness. There are cases in which there is no stupor, although he may complain of headache and usually does, and there is some confusion of mind. Then there is the fourth form, the *abortive epilepsy*, in which the phenomena are irregular, and in which there is not generally, a complete loss of consciousness. In that there is not so much convulsion as in the others. I have seen a person cross the room and take another chair, and coming back again having no recollection, but during that period answering questions with a certain degree of perspicacity.

Q. Take the case where maniacal demonstrations either precede, or take the place of, or immediately succeed an attack of epileptic convulsions,—state the condition in which the patient would be during that paroxysm?

A. During a paroxysm of what is called epileptic mania the condition, as I have seen it, is one of forced excitement, intense maniacal excitement with the face very red, the eyes suffused, the countenance exhibiting excitement of mind and of body. During that time the patient may perpetrate acts of violence, and very often does.

Q. What would be the nature of these acts of violence as regards the fury?

A. Generally without motive; a patient under those circumstances is as apt to attack his best friend or himself; they lose the recollection of what preceded, and lose all idea of any motive.

Q. They have no motive?

A. Apparently not, unless it is a false one.

Q. They have a sort of blind rage?

A. Yes, sir.

Q. A tendency to repeat blows?

A. They frequently do, or they may, under the influence of maniacal excitement from epilepsy, be governed by illusion which takes its place at the time.

H. When fury passes, have they any recollection of what has taken place?

A. No, sir.

Q. These attacks of epilepsy, do they not usually occur about the same length of time in the same person?

A. They very generally do at first, but there is a tendency in the attacks to become more frequent as the disease advances. Thus a patient may be taken with epilepsy, and have but one attack a year, and gradually they will recur more frequently. It may begin, however, with frequent attacks.

Q. While a person is in this furious state, is it not a conclusive symptom of the passing away of that paroxysm of fury, which may precede, or take the place of, or succeed the epileptic convolution, that the person ceases to be violent, speaks to those about him, relates what has taken place, and is obedient to the control and command of those around him?

A. Yes, sir; the best evidence of the return of the reason is the conduct of the patient.

Q. The fact that the fury has passed away and he speaks of what has been done, is conclusive evidence that that state of mind has passed away?

A. It would be to my mind.

Q. Is it not in your opinion the fact that when the patient is calm or has ceased to be violent, obeys those about him, recollects the violence he has committed, and gives the particulars how it happened, and when and why he did it, and there is no delusion about it; are not these facts conclusive that the act was not performed in the paroxysm of fury, or in that state of mind in which such fury breaks out?

A. It is conclusive evidence that if it was performed during an epileptic paroxysm, he is no longer in that paroxysm.

Q. Is it not evidence that the act itself was not performed in that paroxysm, the fact that he remembers it and speaks of it, and gives a motive for it, and there is no delusion or illusion about it?

A. Yes, sir.

Q. Is not among the first symptoms of dementia, the loss of memory of recent transactions?

A. I presume it would ordinarily be called loss of memory, but it really consists in the loss of power of attention. A thing does not make the same effect upon the mind. It gives the appearance of the loss of memory.

Q. Another symptom is the loss of the passion of love or hate, and of other passions, the loss of fear?

A. Yes, sir; not necessarily the loss of power of expressing emotion.

Q. Can you state the circumstances which might give rise to such facts as have been testified to in regard to the prisoner?

A. Some of them might arise from a partial awakening from sleep, from sleep drunkenness. A person may be waked up in the midst of a dream or nightmare, and does not disassociate things from the dream. That might be one of the causes of the condition of the prisoner in the night testified to in reference to him. Then, too, they might come from transient attacks of cerebral congestion. I recall the case of a very prominent gentleman of this State who went into the hotel at Poughkeepsie, and in consequence of swallowing his food too rapidly, was seized with an attack of mania which lasted for a half hour or more, during which he attempted to injure himself and those about him. I have no doubt that he had an attack of cerebral congestion : such attacks are quite common in my experience, with symptoms of mania.

Q. They pass away?

A. Yes, sir, without obvious result. I don't believe the mind, however, will remain in the same condition as before. They might come from embolism, a little clot of blood that enters the circulation and plugs up one of the arteries of the brain. They might come from a blow upon the head. A fall may produce them for a time. They might come from being consequent upon epileptic paroxysms.

Q. Did you hear the question I propounded to Dr. Montgomery this morning?

A. Yes, sir.

Q. Embracing in that question simply what took place down to the time of his being in jail, or two or three days after the occurrence—what in your judgment was the mental condition of the man on the morning of the homicide?

A. Upon that statement of facts I would say he was perfectly sane.

Q. In addition to that, add the fact that he was confined in jail for about five months; what would you state in regard to the condition of the man's mind at the time?

A. Could not materially modify my opinion. I should not think he was perfectly sane.

Q. What do you mean by that?

A. Simply that from the first statement of the facts given me by you, there is nothing that indicates the man's insanity. The mere fact of epilepsy would not indicate any mental deterioration to affect his acts. The fact of the phenomena you have mentioned since would lead me to infer that he was not in a condition of absolute mental perfection.

Q. That his mind might have been somewhat enfeebled?

A. Yes, sir.

Q. And still he would know what he was doing?

A. Yes, sir.

Q. In addition to the facts which were included in my question, assume that upon five or six occasions, extending over several years, the last of which was two or three years ago, the prisoner disturbed persons sleeping with him, stating that he had seen imps; assume forgetfulness of these things in the morning: that during the week preceding the homicide, the prisoner exhibited symptoms during which he attempted to draw a post from the ground, saying, "Don't you see how strong I am?" Upon one occasion he stated that he had been pursued by five men and the devil, when there was no pursuit. On the day preceding the homicide he had a conversation with the uncle of his wife, in which he seemed natural and calm, and betrayed no peculiarity in his action, speech or expression. He had gone home about 11 o'clock at night with his wife and child, after having conversed rationally and quietly during the day and evening, and in that state had reached his house and gone into his room. What would these additional facts indicate, taken into consideration with the other facts as to his condition on Sunday morning?

A. They would give me no additional information, in regard to his mental condition at the time of the homicide. I should sup-

pose that he was subject to attacks of mental aberration resulting from epilepsy.

Q. And he would have no recollection of what occurred during these attacks after coming out from it?

A. No, sir.

Q. When was the first examination you made of him?

A. The first was day before yesterday, when I examined him in the jail.

Q. Describe fully the extent of that examination, and what took place between you and him?

A. I spent probably about half an hour with him. My attention was first directed to his face, and I think he exhibits evidence of being of a low order of intellect, and possessing a sluggish sort of mind. I base that upon the expression of his face and dimness of his eyes, and the absence of facial lines spoken of by Dr. Gray. I think his face is turgid, similar to his hands. I can't recall an instance when there was so great a turgidity of the hands as he has. I asked him a number of questions, to all of which he gave perfectly intelligent and rational answers, perfectly and conclusively connected with the question, except in regard to the homicide: in regard to that he expressed an utter want of knowledge. I asked him if he had had a child, and he said he had. I asked him its age, and he said a year. I asked its name, and he said Andrew. I asked the sex of the child, and he said he did not know. My impression about that was that he was deceiving me. I questioned him further about his habits. I asked him if he drank anything, and he said he occasionally drank a glass of beer. I asked him if he did not occasionally drink a glass of whisky; he said he might occasionally, but not to excess. I felt his pulse, and it was about one hundred and ten, running from one hundred and eight to one hundred and ten; it was rather feeble. I examined him with an instrument for determining the amount of sensibility he possessed, because, in my experience in cases of dementia, there is a lack of sensibility of the skin; and I endeavored to determine with an instrument whether he possessed the ordinary normal sensibility. I found he did. The instrument is what is known to mechanics as a beam compass. The sensibility of an individual is measured by the obscurity of his perception in reference to whether he is touched by the points. The person will not feel the two points if at a less distance apart than three-quarters of an inch. I found that he possessed the sensibility on the side opposite the defective ear, which I think is the right ear; upon the left

side there is a slight want of sensibility. I detected that, more particularly, at my second examination.

I examined his eyes with the ophthalmoscope, for in cases of dementia, I should expect to find the circulation in the vessels in the eye, unnatural. I find the vessels perfectly natural, and the circulation natural. He said that the light hurt him very much, and he contracted his eye to a certain extent, so that it was a long time before I could get a view of it; and every time I attempted to examine the eyes he closed them, until I spoke tolerably sharp, and I observed that there was not that excessive sensibility which his motions would lead me to expect. I examined him with reference to the shape of his head. At the second examination, I asked him first, if he had found out what sex his child was, and he said he had; that his brother said it was a boy; I asked him if he knew me, and he said he did; I asked him if he had seen me in the jail, and he said yes. I examined his ear, but could not make a satisfactory examination without an instrument. There is a little indication of moisture, which indicates a trouble about the ear; whether that extends to the inside of the skull, I could not tell; but I am inclined to think it does, from the fact that he had the trouble when young. I presume it did not injure his hearing. I found his pulse 108 to 110. When I put questions to him, which allowed of any mirth being exhibited, he smiled in a natural way, and his appearance was altogether brighter when I examined him, than it is in the court room, although I think he is of a low order of intellect. I don't want to be understood that he carried on a conversation with me: he answered my questions intelligently and rationally, but he did not originate any conversation.

Q. He did not speak unless you spoke to him?

A. No, sir; when I asked him the sex of his child, his face lighted up to a degree that surprised me. I should judge from his manner that he had been attaching considerable importance to the question.

Q. Taking all the facts which I have assumed in my questions to you, and adding to these facts the examination you have made of the prisoner; what, in your judgment, would all these facts, and the examination, lead you to think of his mental condition at the time of the commission of the homicide in November last?

A. They would not essentially modify the opinion I have already expressed.

Q. His condition was sane?

A. Yes, sir, from the state of facts you have given me.

Q. Would not the fact that a man betrays, from the time of its birth, great anxiety about his child, in regard to its morals, after the commission of such an act, afford strong evidence that such person was not suffering from dementia?

A. Yes, sir, very strong.

Cross-Examined by Mr. Martindale.

Q. Assume that on the night of Saturday he was wild, appeared as though he had no fear, insisted upon a man staying with him all night, who lived out in the country and was temporarily there, and when responded to, that he could not do it, told him he could do it as well as not, and in a manner to inspire fear. Assume, also, that there was a condition of actual mania upon the preceding Thursday, he seeking to escape from the pursuit of five men and the devil, by getting around a wagon that night, followed by want of sleep. Assume an actual, convulsive, epileptic fit on Tuesday. Assume that the Monday night before he had manifested the appearance which has been described here by his father, whom he told to say the Lord's Prayer, quick, quick! Assume that on the afternoon of Sunday he was wild, answering that he had been in jail a thousand years, and saying, without apparent cause, "Go away, you have troubled me long enough." State to me your opinion as to whether the prisoner is sane or insane?

A. Assuming the truth of the facts which you have given me, I should be very certain to view the act with a good deal of suspicion, as to its being the act of a man in the full possession of his intellectual faculties. I should presume, without further inquiry, that the case was one of very grave doubts, and I am inclined to be in favor of the prisoner, and I should then be driven back to the act itself.

Q. Assume that all you know about the act, is first what you can get from the character of the act itself. That having retired, in early morning the prisoner is seen but partially dressed, and going out from the house, and that one single blow had been dealt upon the head of the woman, and he rushing then to kill himself. What would be your opinion as to the character of the act?

A. Setting aside the evidence in regard to his having waited five minutes, I should be inclined to think it was an act perpetrated under the influence of temporary insanity.

Q. All there would be to create a doubt, would be the estimate of the length of time he stood over his wife?

A. That would be the main element; the fact of his stopping long enough for reflection, would be incompatible with its being an act of insanity.

Q. You have referred to cases where a party is under delusion in regard to the wife's fidelity. Does the fact that it is a delusion operate on the insane mind in another way than the fact would operate if true?

A. It would act the same.

Q. If it were a fact, it would have the same effect?

A. It would have the same force.

Q. Assume that this young man had been religiously brought up, an industrious, hard working man, not addicted to intemperance or other vices. What effect does that have on the opinion you have expressed?

A. I don't know that it would essentially modify it; perhaps, upon fuller consideration, it might make it somewhat stronger.

Q. Your attention has been called to paroxysmal insanity?

A. Yes, sir.

Q. Were you a witness in the trial of McFarland for killing Richardson?

A. Yes, sir.

Q. And you gave evidence that he was insane?

A. Yes, sir, and he was acquitted upon my evidence; but he had given evidence of insanity for weeks, and he is now in an asylum. There are a number of cases on record in which persons have been impelled to commit acts of violence, in which there has been no delusion, but in which the person has been irresistibly impelled to commit the act in question.

Q. When an epileptic has suffered from an attack, does the mental disturbance continue several days?

A. It does frequently.

Q. And during the time may he transact business without attracting the attention of experts to his condition?

A. Yes, sir.

Q. Are you aware of the fact, that the suspicion of insanity attaches for several days after the known attack?

A. In the French Courts an act of violence committed by an epileptic within three days after a well known convulsion, is sufficient to throw the onus of proof upon the prosecution.

Q. Assuming all these facts, what is your opinion as to whether he is sane or insane?

A. I have some facts in regard to him which you have not

stated. I think I understood that he has had no epileptic paroxysm since in July; a period of fully six months has elapsed without a paroxysm. I think he is sane enough now to know the consequence of his acts.

Q. Do you mean he is now a sound man?

A. No, sir.

Q. Do you think he is suffering from cerebral disease?

A. Yes, sir.

Q. That is, disease of the brain?

A. I think so.

Q. That tends to enfeeble him both physically and mentally?

A. Yes, sir, but from the fact of his having no paroxysms for six months, his mind ought to be in a better condition than it was six months ago, and I labor under the disadvantage of not seeing him before, or of examining him before it occurred. I don't know with any degree of certainty, whether his present sluggish intellect is natural or otherwise. I am inclined to think it natural, but give my opinion with some reservation.

Q. Are you able to state, assuming that during the time he has been in the cell he has had an idea of an attack by some person in the cell, and having violent headaches, and with these other concealed facts of his epileptic condition, what would you think of his having a seizure of *petit mal*?

A. It might have been, but I should not infer it from that state of facts. He may have the same symptoms from slight causes, from indigestible meals for instance.

Q. Assume that after the departure of his wife in October, he converses about the loss of his child, and that during the conversation his appearance changed, he turned red in the face and cried and laughed at the same time, and then proposed suddenly to pull up a post that all the folks in the house could not pull up, and then starting and going away?

A. I should think he had had an attack of *petit mal*.

Q. And that he was then in a fit of insanity?

A. Of mental aberration.

Q. By that you mean insanity?

A. I mean insanity as scientifically considered; such an act is very similarly performed by a young lady now under my charge.

Q. You heard the description by Dr. Gray of a patient in the Asylum, a man who thought his wife was unfaithful to him, who conversed about his accident, but who after breaking his arm actually forgot it?

A. That is a very striking and interesting case, it is almost unique. I think he must have been unconscious most of the time. At the same time he thought the medicine administered to him was poison.

Q. Take the case mentioned by Dr. Cook of the person now under his treatment, continuing for a number of days talking, and talking coherently while in this condition, and afterwards entirely forgetting everything.

A. The impression I got of that case was, that it was a case of insanity in which epilepsy had supervened, which is a very different thing from the case we are considering. I don't think that was a case of epilepsy with superinduced insanity.

Q. It is your opinion that epileptic insanity may be associated with insanity of a different character?

A. Yes, undoubtedly.

Q. You are familiar with Ray's Medical Jurisprudence?

A. Yes, sir.

Q. In his treatise upon insanity, there is a statement that the attacks sometimes occur without warning but often preceded, &c.?

A. There are no cases in my experience so difficult of enquiry as epileptics.

Q. Are there the evidences here to your mind of the most powerful exciting causes?

A. There are powerful exciting causes, but the circumstances of the act as detailed, are not consistent, to my mind, with those of an epileptic, with all the antecedents of the prisoner and his subsequent conduct; his indisposition to escape, his voluntarily confessing the crime, are incompatible with such an act committed during an epileptic seizure, as well as the fact of the prisoner considering the matter for five minutes before committing the act.

Q. Suppose, in fact the party, as he rose and saw the ax—seeing the ax may have excited him?

A. The sight of a murderous weapon may excite an insane person.

Q. Suppose a person attempts to resist the impulse and then yields and strikes?

A. That is rather a different condition of mind. In temporary insanity from cerebral disturbance, there is no disposition to resist.

Q. Are you acquainted with Dean's Medical Jurisprudence?

A. Yes, sir.

Q. Would not the starting of the idea, by the sight of the weapon, and the commission of the act, occupy an interval of time;

may there not be an appreciable interval between the impression and the execution of the blow?

A. There might be some interval, of course.

Q. The duration of that interval is all the element in this case which would excite doubt in your mind?

A. The duration of the interval, the statement of the prisoner that he had waited five minutes, is the principal element; and the other statement that he was unable to live with her under the circumstances, is another element.

Q. And the statement that he was unable to resist the impulse, assume that instead of five minutes it was five seconds?

A. Then the main element would be taken away; but there would be still remaining the element of motive, and there would be still left the suspicion that it might be done in the heat of passion.

Q. The party whom he strikes is asleep, does that not materially affect the character of the act?

A. Yes, sir; but then there is the statement of the prisoner that his temper got the better of him.

Q. Do you mean that in your judgment the infliction of that blow suddenly, on a sleeping woman, where there was no appreciable interval of time, connected with these preceding conditions of excitement, wildness the night before and actual convulsions during the week, do you mean to qualify your opinion that it was an insane act? What is your opinion?

A. In the recent questions which you have been putting to me I have understood that you are endeavoring to get my opinion as to the state of his mind at the time of the act. So far as the act is concerned it touches nothing. If I come into a room and see a person drawing a pistol upon another, I don't know whether he is in the heat of passion, or intoxicated, or in a fit, or in a moment of insanity.

Q. If he had an epileptic convolution during the week before, deluded with the idea that he had been pursued by five men and the devil; he was wild the night before, and he is an epileptic; what then?

A. Those are all circumstances which I have taken into consideration; they are entitled to weight; they are an issue requiring a medical witness to give an opinion with great care and caution, and they alone, would govern him in my opinion. But I have other facts of his having quarrelled with his wife in the night, or that he said so.

Q. Assume the fact that there is no evidence that he quarrelled with her, but that he solicited her not to go with other men, and she refused. Assume that they had no words before he got up; that is my understanding of the evidence; suppose when he got up there was no provocation and no words, and he loved her, and struck her because he was unable to resist?

A. Assuming the truth of that, he was insane.

Re-Examined by Mr. Peckham.

Q. Assume that he had these words the night before, after he got back, or in the morning, and that he had great anxiety in regard to his child, and also that he said he loved her, but would rather see her dead than continuing to live in that way, and he had rather see his child dead than brought up in a house of prostitution, and he then got the ax and deliberately struck the blow?

A. It was a sane act. Deliberation takes away the idea of an insane act.

Q. Instead of the wildness spoken of, take the case that the man at eleven o'clock at night on Saturday, betrays it to no observer; that he is in the company of a man who has been with him most of the day, and he goes home, having had a calm, connected, coherent conversation, then what was his condition?

A. Those are additional facts that tend to show his sanity.

Q. Suppose he asks a man to stay with him in an excited way, but when the man says he can not, he says yes, he can; but on his repeating it allows him to go, and subsequent to this time he has, this long, calm conversation with his wife and her mother, and her uncle, and leaves the house at night in a perfectly calm manner?

A. These facts would tend to strengthen my opinion.

Q. Of sanity?

A. Yes, sir.

Q. Is not the fact of delusion one of the principal, if not the principal evidence of insanity?

A. It is one of the evidences.

Q. And, although a party might act when the delusion is present and perform a furious act, would it be the same kind of an act, so far as the mental capacity was concerned, as if there was a motive?

A. It would be.

Q. Suppose a man had known two years that his wife was unfaithful, added to these other facts?

A. That would not increase my idea of his sanity. If he

endorsed quietly such a state of affairs it would show a pretty low order of intellect.

Q. And not a keen appreciation of his own honor?

A. No, sir.

Q. But it would be an entirely different case to that where the knowledge was just sprung upon him?

A. Yes, sir.

Q. In regard to the fit of Friday, have you ever known a case of an epileptic fit or seizure when, during the continuation of it, the party will be spoken to and will answer and then relapse into the same condition, and being spoken to again will answer and relapse again?

A. Never.

Q. Is not such a thing incompatible with the idea of an epileptic seizure?

A. I think so, entirely.

Q. If an assumed fit should be described to you as epileptic in its character, where there was an assumed frothing at the mouth, and it should be also given to you as a fact that during that very time he spoke when spoken to, and answered questions put to him, would it not be conclusive evidence that it was not epilepsy?

A. Yes, sir, with the frothing at the mouth, but there are conditions of epilepsy which are abortive.

Q. Supposing he remembers the fact of a woman calling for him to take her trunks, but forgets where he was to go?

A. I should say very certain that it was not an epileptic attack.

Q. In regard to the case spoken of by Dr. Gray, there was delusion, and during the time of supposed unconsciousness he had the delusion in regard to his medicine, and the whole idea of his unchastity was entirely a delusion?

A. I so understand it.

Q. After he came out of these attacks he failed to acknowledge that it was a delusion?

A. Yes, sir.

Cross-Examined by Mr. Martindale :

Q. What is your opinion of a person who appreciates the value of chaste character, an industrious man marrying and hearing his wife is a prostitute, which gives him great distress, and yet he endures her and loves her. What is your opinion as to the effect of that fact as bearing upon his mental condition?

A. The two things I think are somewhat contradictory.

Q. Assume the fact to be that this person shows those irregularities and eccentricities?

A. They are evidence of a weak mind.

Q. They are evidence of a very affectionate temperament?

A. Yes, sir, but of weak mental power.

Q. When McFarland shot Richardson, the passion was excited by the idea that Richardson had debauched his wife?

A. Yes, sir.

Q. In that case in your opinion, the idea of infidelity had absolutely excited an insane homicidal frenzy?

A. Undoubtedly; I do not know of any circumstance in the whole range of society, which is more calculated to excite it than that thing.

Q. Does this man's face furnish any evidence of disease?

A. It does.

Q. What kind of disease?

A. I am very clear in regard to the existence of disease of the brain—cerebral disease.

(*Question by Mr. Peckham:*)

Q. That is entirely and totally different from insanity?

A. Yes, sir; although insanity can't exist without disease of the brain.

(*Mr. Martindale, resuming.*)

Q. Where cerebral disease is progressing as in this case, and epilepsy is associated with it as in this case, and where the person has attacks of insanity as you have described them, and there has been an attack of epilepsy during the week preceding the act—What would be the medical presumption as to the insanity at the time of the commission of the act?

A. *A priori*, at once, that the person was insane, and it would require inquiry to dissipate that presumption.

The reader must have noticed the striking conflict between the answers given by Dr. Hammond to the prisoner's counsel and to the District Attorney respectively. I will examine the medico-legal points in the case of David Montgomery as categorically presented by Dr. Hammond himself, in a review published in the *Journal of Psychological Medicine* for January, 1872.

I will base my opinions on the facts, as directly testified to on the trial. Dr. Hammond, in the article just cited, clearly overlooks evidence of great weight going to prove that Montgomery was an irresponsible agent when he struck his wife, and that he labored at the time under epileptic insanity. The facts as presented by Dr. Hammond in his article differ in many essential points from the testimony I have already noticed. Dr. Hammond says: "The medical experts who supported the theory of the prisoner's insanity were Dr. Cook, of the Asylum at Canandaigua, and Dr. Gray of the Utica Asylum; those who thought differently were Drs. Moore and Montgomery of Rochester, and myself." The records of the trial show, nevertheless, that Dr. Edward M. Moore, was sworn for the defendant, and testified as his conviction, that Montgomery was insane; that he exhibited an insane susceptibility and maniacal excitement, due to the recurrence of epilepsy. [Dr. Hammond, however, omits to mention Dr. Whitbeck who did agree with him.] Dr. Hammond's opinions rest upon particulars, mainly derived from the prisoner, completely ignoring the important events in evidence portraying the mental state of Montgomery, and his diurnal fits throughout the week, as also on the very day before the homicide. How much at variance the history given by Dr. Hammond in the *Psychological Journal* is, with that which has been here faithfully abstracted from the records of the trial may be judged from the following quotation:

"The prisoner Montgomery is twenty years of age, has followed the occupation of a carter, and has never been suspected of mental derangement, dementia, or epilepsy, by those who knew him, outside of his own family. [During the trial the following witnesses testified, most positively and directly, as to their seeing Montgomery acting crazy, while in one or more obvious epileptic fits: to wit, *Philip Bachs, Susan Papino, Christine Cuthbert, Isabella*

Macbeth, Rosetta Kennison, Mary Jane Fisher, former nurse at Canandaigua Lunatic Asylum, *Catharine Donovan, Phebe B. Westcot* and *Robert Y. and Catharine Metcalf*; ten witnesses outside of the members of Montgomery's own family.] Several members of the family, however, testified, in the previous proceedings relative to his sanity, that he had been subject to epilepsy since infancy, but the Commissioners could only satisfy themselves that he had three attacks up to the time of the homicide; therefore, it may easily be assumed that, notwithstanding the possible existence of epilepsy, his mind has not, in consequence of such disease, undergone marked deterioration. [In addition to the three attacks of *grand mal*, the Commissioners declare to have found evidence of numerous seizures of *petit mal*, and that at these times Montgomery exhibited maniacal excitement with tendency to violence, —2d conclusion of report.]"

"At the age of about eighteen he married, but had lived upon bad terms with his wife, who had been a prostitute, and who insisted upon returning to her former occupation. A week before the homicide she left him, taking with her their child, eight months old. [It is in evidence that Montgomery took the child to his father's house and kept it, until he went to see his wife with White, on Saturday noon, when the young brother-in-law brought the baby to its mother.] On the evening of the day, Saturday, before the homicide, Montgomery went to her mother's, where she was stopping, and persuaded her to return home with him. They arrived at their own home about twelve o'clock at night, and she was killed the next morning, between the hours of six and eight. Many of these particulars, as well as the subsequent ones, are derived from the statements of the prisoner. [This certainly accounts for their want of correspondence with the evidence bearing on the above points.] From these statements it appears, that they awoke early in the morning, and began to talk of their difficulties. He told her, that, if she would remain at home and stop going with other men, he would forgive her. She replied that she would not, that she was a prostitute when he married her, and he knew it, and that she had always been one, and always would be one. He replied that he had made up his mind that, if she would not live with him, she would not live with any one else. He then got out of bed, partially dressed himself, and went to his father's house, a few rods distant, and took from the back yard an ax, with which he returned to his own residence. On entering the room where his wife was, he found her asleep. He stood by the stove a few minutes, delib-

erating whether he should kill her or not. Finally he determined to do so, and then struck her on the head, just above the left temple, inflicting a mortal wound, of which she died."

"He then left the house, and, meeting a younger brother in the street, told him what he had done, and then taking a razor from his pocket attempted to cut his throat. In this effort he was prevented by his father and brother, and was by them persuaded to give himself up to the police. On his way to the jail he stated to the officer that he had at first thought of going to Canada after killing his wife, but, concluding that he would be caught, he had determined to give himself up. In these particulars there is no one fact indicating insanity, dementia, or epilepsy, besides the fact of voluntary confession and surrender. This, unaccompanied by other evidences of mental aberration, is of little importance, and is materially lessened in its force by the opinion of the prisoner, as expressed to the policeman, that he thought he would be caught if he attempted to escape. As regards temporary insanity from morbid impulse, there is no evidence to show that Montgomery had exhibited any indications of mental derangement during the few days preceding the homicide." *Quarterly Journal of Psychological Medicine*, January, 1872; page 66, et seq.

So far as the mental state of David Montgomery is concerned, it would be entirely out of place to judge of it but by the real facts in evidence. The history just quoted contains a great deal of hypothetical matter, it being reproduced here only to make manifest the inaccurate premises to the conclusions drawn by Dr. Hammond; and any theory built upon such foundations will hardly be admissible to elucidate the case of David Montgomery. There are, however, scientific assumptions which have been made during the trial and reaffirmed, most of them, in the article under consideration, which call for more than a passing remark.

"*It by no means follows that an individual suffering from epilepsy is not as fully responsible for his actions as healthy persons.*" This point is asserted by Dr. Hammond in a manner too absolute to be safely accepted as that of a medico-legal guide. No alienist ever pretended

that, from the mere fact of having been subject to epilepsy or insanity at some previous time, an individual becomes thereby irresponsible for his civil or criminal actions; but when, as in the case here examined, the commission of the act and the epileptic seizure succeed each other, when a close relation exists between the two, or again, when the act is perpetrated during that state not yet clearly appreciated of epileptic insanity, the responsibility of the individual becomes questionable and is so acknowledged by such high authorities as Delasiauve, Falret, Troussseau, Legrand du Saule, Castelnau, Baillarger, and many others.

The weight of Reynolds' authority is brought to confirm the opinion that, "*epilepsy even when fully pronounced does not necessarily involve mental change.* In 38 per cent. of Reynolds' cases the mind was unaffected in any way. He further declares that while considerable intellectual impairment exists in some cases, it is the exception and not the rule; and also, that ulterior mental changes are rare." It is, indeed, strange that the glaring contradiction into which Reynolds falls on proclaiming the above results should not have struck Dr. Hammond; for, most assuredly, if 62 per cent. of the epileptics under Reynolds' care exhibited mental change, the intellectual impairment can not be a rare exception with epilepsy. On the next page to the one where Reynolds lays down these conclusions and gives his reason for doubting the existence of any necessary "consequences" of epilepsy, he writes, contradicting himself, under the heading of "Complications especially 'nervous' in their character"—"Besides the failure of the intellect, which has been already shown to be frequently associated with epilepsy, there are special conditions of disturbance to be met with in some individuals; these conditions occurring in more or less definite

relation to the attacks. Thus, mania not unfrequently complicates the affection of the epileptic, and epileptic mania has a characteristic of its own. In the sixty-nine cases which have been analyzed in this treatise, some attack or attacks of mania occurred in seven individuals, or in 10 per cent., viz: four males and three females." ("On Epilepsy." London: 1861. p. 206.) The insufficiency of sixty-nine cases upon which to rest these conclusions is too apparent. The number is too small to furnish any precise data, and, consequently, we see Reynolds arriving at such conclusions as the following, introduced here simply to confirm our assertions: "The duration of epilepsy exerts a slight and doubtful influence upon the mental, motor, or general health of the patient. Epilepsia mitior is not essential to, and does not especially produce mental failure," although in another place Reynolds declares that, "the attacks of epilepsia mitior are relatively more common among those whose mental condition is impaired than among those who exhibit no intellectual failure," which naturally indicates that there must be some important relation between epilepsia mitior and mental failure. Then, again, "the mental condition of epileptics does not depend upon the age at which the disease commenced, whereas early commencement of epilepsy, or commencement before puberty, is of favorable omen in the prognosis of an individual's intellectual chance." "Epilepsia mitior can be considered neither the initial stage, nor the after consequence of the severer forms." Finally, "neither one of the following elements—kind of attack, frequency of either form, rate of frequency, nor duration in years—is either by itself, or in combination with the other elements mentioned, sufficient to determine the mental condition of the patient."

If I have been particular in presenting the foregoing

quotations it is because I also recognize the work of Reynolds as one of the best on Epilepsy. But, I have statistics of 532 cases which disprove the above conclusions. That the development of epilepsy in infancy, or before puberty, is observed among individuals most of whom are tainted with a hereditary predisposition to the disease, and that it also usually impairs the intellectual faculties, is a fact too well known by those in charge of epileptics; wherefore, instead of considering it as a favorable omen, I look upon it as one of the most adverse circumstances in the etiology of epilepsy. The efficient part that epilepsia mitior takes in the production of general spasms is too self-evident and indispensable to be regarded as a mere coïncident event. Nor could I say, after a large experience with epilepsy, that the kind of attacks, frequency of either form, rate of frequency, or duration in years, are neither separately, or in combination, sufficient to determine the mental condition of the patient. The commencement of epilepsy in infancy, the frequency of its attacks, the combination of the epilepsia mitior and gravior, and the great recurrence of the former, have been the most potent factors to induce mental deterioration in the cases under my observation, and, in these respects, my experience fully agrees with that of Esquirol, Delasiauve, Falret, Troussseau, Baillarger, Morel, and others. Boileau de Castelnau, in his standard work "On the Relations of Epilepsy to Mental Alienation," says: "When epilepsy has lasted a long time one must expect to see it ending in enfeeblement of the intelligence and of mobility. The younger the individual at the commencement of epilepsy the more mental alienation is to be dreaded." It is not, therefore, by accepting any of the singular conclusions of Reynolds in regard to the mental state of epileptics

that we may be able to understand the true nature of the mental condition of Montgomery when he murdered his wife, or trace the crime to its true origin, his epileptic disease, displayed by numerous attacks of *petit mal*, with less frequent of *haut mal*, and the condition of dementia, or rather of epileptic insanity, noticed by the four Commissioners, and which was still persisting on the 24th of last August, when the writer visited Montgomery, and made a careful examination of him.

Dr. Hammond testified that: "*Not many cases of epilepsy are accompanied with insanity or obvious mental deterioration. According to his experience fifty per cent. [are not these a great many?] develop mental deterioration, their mind being weakened in some of its parts.*" Few will hesitate to agree with me in the great difficulty of drawing the line between insanity and mental deterioration or a mind weakened in some of its parts. As no recognized standard exists on the subject, nor can any line of demarcation be fixed where responsibility ceases, and irresponsibility, by reason of a mind deteriorated or "weakened in some of its parts," begins, it is, indeed, unsafe to leave such a question before a jury for their deliberation. Mental failure has been evident in 374 of the 532 epileptics whose history I have analyzed, or in 70.3 per cent. Of this latter number 267 exhibited attacks of mania, lasting from a few minutes to several days or weeks. One hundred and thirty-three, or a little over one-fourth of the whole number, were subject to periodical fits of cerebral or larvated epilepsy, alternating with, or supplanting the convulsive attacks. In regard to mental failure I may further state, that in all the cases where epilepsy has been attended with paralysis, and the fits have kept a progressive course, a more or less manifest impairment of the intellectual faculties, an obvious state of dementia,

has always been present. I have noticed the fact particularly in 248 cases, but 123 of them are exclusive of the 532 above referred to, because epileptiform convulsions and paralysis were displayed from the outbreak of the disease, and I do not, therefore, consider them as instances of genuine epilepsy. My observation concurs in this respect with that of Sir Henry Holland, (*Medical Opinions upon the Mental Competency of Mr. Parish.* New York: 1857. p. 570,) who says: "Having in an active practice of forty years, seen and noted very many cases, in which successive paralytic and epileptic attacks were conjoined, I do not recollect a single instance among these, in which the intellect was not more or less impaired, and very seriously impaired, when the epileptic fits were as frequently repeated as in the present case." The only object I have had in view, in bringing forward these statistics, is to make it manifest—that mental changes are in nowise exceptional or rare, but most frequent phenomena in the history of epilepsy, notwithstanding the statements to the contrary made in Montgomery's trial by Dr. Hammond.

I must make one more remark before disposing of the subject, namely, that the proportion of epileptics whose mind becomes impaired to the degree of insanity in consequence of their disease, is a question wholly immaterial and of no medico-legal bearing upon the question whether Montgomery, afflicted with epilepsy, was or was not accountable for the murder of his wife. It has not been held by the defence, nor by the skilled medical experts who testified to the insanity of Montgomery, that epilepsy leads to insanity in every instance, and that therefore Montgomery was insane. What the physicians verified, upon personal examination, is, that Montgomery, in addition to the other physical manifestations peculiar to epilepsy, displayed signs of dementia, pre-

ceded by undoubted fits of *haut mal* and numerous seizures of *petit mal*, seizures of the worst form, dating since infancy. Consequently, all that was required on the part of the people was to disprove this point and the several facts in evidence, occurring successively during the week previous to and for hours after the homicide, which bear on themselves an unmistakable stamp of epileptic insanity. It is not because Montgomery ever had epileptic fits, but because he labored under epileptic insanity, at the time of the homicide, which was preceded by several paroxysms recurring during the week previous, that he should be declared unaccountable for it. The reality of Montgomery's insanity could not be affected in any manner whatever, whether one or seventy actually become insane out of a hundred epileptics; for, let me repeat it, the sole point at issue was that Montgomery was in such a state of epileptic insanity on the morning he struck his wife.

According to Dr. Hammond, little importance should be attached to the views of Asylum physicians on the subject of responsibility of epileptics, because the epileptics in lunatic asylums are at the same time insane. This opinion is proclaimed as in keeping with those put forward by Falret in his valuable essay "On the Mental State of Epileptics," wherefrom a passage is quoted in which the eminent French alienist arrives at the following conclusion:

"The question therefore, of the responsibility or irresponsibility of epileptics can not be defined in an absolute manner, since we must consider certain epileptics as guilty of the acts imputed to them; at certain periods of the disease, the appreciation of this responsibility becomes extremely delicate in each particular case. Thus the only practical manner of putting medico-legal questions relative to epilepsy and mental alienation is

that which has been hallowed by custom. Was the individual of sane or insane mind when he committed the act for which he was arraigned before the bar of justice? If he was insane, he ought to be considered irresponsible: if not, he ought to be condemned as guilty."

Having carefully studied Falret's most excellent work, I fail to discover in it any views coinciding with the extreme opinions so unreservedly put forward by Dr. Hammond. In regard to the conclusion just quoted, it is indeed in accordance with the soundest views held by every alienist who has paid special attention to the subject of epileptic insanity; and obviously of no application to sustain the grounds against its admission in Montgomery's case. There are yet, other statements following the above passage, which manifest most clearly and concisely that Falret has endeavored to propound a very different doctrine from that ascribed to him by Dr. Hammond. A few lines below the point where Dr. Hammond stops, Falret says: "Instead of endeavoring to measure the morbid impulse in each individual, and the amount of resistance which his will could oppose to it, (both of which it is impossible to estimate with exactness,) certain authors have sought to discover more practicable means whereby to decide upon the normal freedom of epileptics at the time they perpetrated the act for which they are charged. Some of them have granted that the same patient may at the same time be declared responsible for certain acts and irresponsible for certain others, according as the acts were, or were not, in direct relation with the ruling abnormal idea or impulse. It has been sought to apply, not only to epilepsy but to different kinds of partial insanity, this doctrine which appears to us altogether inadmissible. We can not comprehend this division

of the human individuality into two parts, of which one would be led irresistibly by a delirious idea or a morbid desire, while the other would retain its self-control and would be considered responsible for its act." * *

* * "In doubtful cases, that is to say, when the civil actions have not been performed during the manifest paroxysms of mental disease, (as those of mental *grand*, or *petit mal*,) nor yet during a continued state of insanity, such as exists in inveterate epileptics, they should ordinarily be considered valid. We can not, indeed, according to our idea deprive a whole class of persons, whose disease has already entailed upon them so many misfortunes, of the exercise of their civil rights, and this, when experience has shown, that, notwithstanding changes of character and temporary weakness of mind, these persons may enjoy in the interparoxysmal periods long intervals of reason. We think, therefore, that generally speaking, in a doubtful case, one ought to incline the balance in favor of validity of action, whenever the point is discussed in civil cases, whereas it should be inclined in favor of irresponsibility in criminal cases."

It is curious but true that the last strange contradiction, and the preceding clear statements, prove very plainly that Falret extends the irresponsibility of epileptics in criminal cases far beyond the limits stated by Dr. Hammond, whose views could not be consequently admitted as fully concurring with those advanced by Falret. Evidently it has not been Falret's intention to lessen the capacity of asylum physicians to pass correct opinions on the subject of epilepsy. Proofs abound throughout the above quoted work and his other writings, to show that Falret believes it is only by close watching of epileptics in a hospital, and not in society where they can conceal their disease, that

every shade or feature of epileptic insanity can be appreciated. The standard work of Falret on the mental state of epileptics, the result of his long experience as Physician to the First Section of Lunatics at the Salpetriere Hospital of Paris, is the most eloquent proof that asylum physicians have opportunities more likely to render them qualified to judge of the phenomena of epileptic insanity than others.

Dr. Hammond says—that *insanity with epilepsy is a very different thing from the insanity which results from epilepsy*; and, during the trial, declared that a case presented by Dr. Cook, where a patient, in a condition of epileptic mania, remembered what had taken place while he was in fury, was an example of insanity in which epilepsy had supervened, and not a case of epilepsy with superinduced insanity. Another similar case, described by Dr. Gray, and to which I will allude hereafter, was considered by Dr. Hammond as almost unique. Let us see if there is really any difference between insanity with epilepsy, and insanity from epilepsy; or, to put it more correctly, if the two conditions exist and differ from each other, and whether their difference has any medico-legal value. Boileau de Castelnau, in his model work “On the Relations of Epilepsy to Mental Alienation,” says: “Observation shows that epilepsy leads to insanity, whereas the latter rarely superinduces epilepsy.” In my long experience with epileptics I have not had occasion to record one case where insanity superinduced the epileptic disease. I have carefully inquired into the subject in 532 epileptics, whose history I have noted, and in 742 lunatics, who, up to this date, (September,) have been admitted into the New York City Asylum for the Insane, since its opening, December 13th, 1871. I may state, on such personal observation, that in every

instance, paroxysms of *petit mal*, or *grand mal*, or nocturnal attacks preceded epileptic insanity, whereas I have come across no case in which insanity has induced epilepsy. Epileptiform convulsions, however, have occurred, not infrequently, in the last stages of dementia, in cases of melancholia with stupor, and in general paresis, but always in the advanced stages of the disease. In all but the last cases alluded to, the autopsies have shown, ordinarily, degeneracy, or plugging of the cerebral arteries: epileptiform convulsions then recur in frequent succession, not seldom leaving behind a choreaic movement of the head or of the face along with coma, in the interparoxysmal periods, and lasting for twenty-four or forty hours before death. I have not seen any patient recover from this condition; and I may remark besides, that epileptic seizures have been particularly noticed by J. T. Sabben among the symptoms indicative of atheroma of the blood vessels at the base of the brain. (*Journal of Mental Science*, April, 1870; p. 53.)

I am informed by Dr. John P. Gray, of the Utica Asylum, whose long experience and learning place him among the foremost of American alienists, that from the histories of some eight thousand patients received and treated at the State Asylum at Utica, during the twenty-two years of his connection with that Institution, he has no recollection of a single instance of true epilepsy occurring in an insane patient; whereas in all the insane epileptics, admitted during that period, it had been ascertained that the epilepsy had preceded the insanity. He has observed, however, that maniacal or melancholic attacks not infrequently took the place of the epileptic seizures, for a more or less prolonged period, and had been sometimes mistaken in their true nature, where sufficient inquiry had not been made into the antecedent

history of the individual. In these remarks, Dr. Gray excluded the common occurrence of epileptiform convulsion in general paresis, apoplexy, or cases of senile dementia. We may, therefore, safely acknowledge that epilepsy from insanity is an extremely rare if not a hypothetical state, not confirmed by any positive experience. There is, finally, as Falret establishes so truthfully, *only one form* of epileptic insanity in which the delirium and the convulsion may exist separately or simultaneously, or alternate with, or follow each other at short intervals, but having essentially the same pathological significance.

I will now allude briefly to the cases of Winnemore, Fyler, John Reynolds, and Chambers, asserted by Dr. Hammond, as instances in which epilepsy was improperly used as a defence.

The facts in Winnemore's case are too familiar to the readers of the *JOURNAL OF INSANITY*, to need further arguments than those so forcibly presented by Dr. I. Ray, who closes the review of the trial, by saying: "Left as it is, it (the case) gives the physician scope for abundant speculation, but no certain conclusion, while to the lawyer its results must seem more like a triumph of ignorance and passion, than of professional skill overcoming every desire and obstacle, and arriving at last to a sure and satisfactory end." That a mistake of judicial authority took place in Winnemore's case is too obvious a fact, whereas Dr. Ray declared Winnemore insane, and it is, therefore, unnecessary to dwell here upon this case unless it be to refer to the argument so ably presented on the subject, by such a high authority as Dr. Ray. (*Amer. Jour. of Insanity*, Oct., 1867.)

As far as the case of Fyler is concerned, he was an epileptic years before the alleged homicide. During the progress of the trial, in the Court Room at Syracuse,

Dr. Gray recognized him as being in an epileptic seizure, and notified the Court, and the proceedings were thereupon temporarily adjourned. The evidence in the case did not bring out his condition antecedent to the crime with which he was charged as to whether he had had any epileptic attacks about that time. He was, however, convicted, but sentence was deferred, and immediately a medical commission was appointed to inquire as to the soundness of his mind. An examination before Judge Woolworth resulted in his being declared insane, and sent to the Asylum at Utica. He had nocturnal fits while at the Asylum after admission, and he was stupid and indifferent to his family. When visited by Judge Allen, who had tried him, and District Attorney Andrews,—both now of the Court of Appeals, Fyler did not recognize either, and did not speak of their visit subsequently. He always denied that he committed the homicide, and maintained that it was the act of two persons who came into the house during the night. Fyler, on the night of the murder, had run to his neighbors, in his shirt, without pantaloons, coat, or shoes,—a cold night with snow on the ground, and gave the alarm that two men were in the house. The persons accompanying him back found Fyler's wife dead,—shot and her throat cut, several doors opened in the house, and the drawers of a bureau out, with their contents scattered about. While at the Asylum, Fyler had a severe attack of remittent fever, after recovery from which his general health improved, and, afterwards, up to the time of his discharge in 1863, no epileptic attacks were known to have occurred in his case. In June, of 1863, the District Attorney of Onondaga County sued out a writ of habeas corpus under which Fyler was brought before Judge Allen, in the Court of Oyer and Terminer, held at Syracuse. Dr. Gray testified that Fyler was so

far recovered from his insanity as to be able to take care of himself. The Court and counsel for the people, on investigation of the case, were of the opinion that sentence not having been passed upon Fyler at the time he was convicted of his crime, he was amenable only to the laws standing on the statute book at the time of his trial, and those laws having in the meantime been repealed by the Legislature, there was no statute under which he could be held or punished. Such being the decision of the Court-of Appeals in Mrs. Hartung's case, the Court therefore discharged Fyler from further custody, his case being most remarkable, not only from the fact that it is the first in our criminal records where epilepsy has been interposed as a defence, but also from the unusual circumstance already detailed.

I have reviewed, in another place, the medico-legal tests of John Reynolds' criminality, as they appear in the certified minutes of the testimony taken by the Court stenographer during Reynolds' trial. I may declare that, as in Winnemore's case, nothing has disproved that punishment was too hastily inflicted upon Reynolds, against the dictates of law and justice, to gratify public clamor, whilst the medical testimony admitted did not truthfully represent, in a strict medico-legal or scientific sense, the important points it was intended to elucidate. I was informed by Mr. A. T. Spencer, in whose store, No. 80 East Fourteenth street, New York, Reynolds was employed, not only that he had a severe fall down two flights of stairs, during an epileptic fit, in the winter of 1868-69, but furthermore, that the very day Reynolds murdered Townsend, he was wandering about Williamsburgh, and in the afternoon entered a house in a bewildered state, seized a pitcher of water standing on the parlor table, dashed the water against the wall, and had to be ejected forcibly from the house.

Of this occurrence Reynolds, of course, never spoke when called upon to give account of what he did during the hours before the homicide. Finally, it is a matter of record that Dr. R. Vance declared Reynolds a free agent, and that upon this and Dr. Hammond's testimony he was convicted and executed. Dr. Vance, when cross-examined by the Hon. Samuel B. Garvin, District Attorney, to whom he had a few days previously affirmed the above belief, gave in McFarland's trial, without any reservation, the following answer, transcribed verbatim from the minutes of the testimony taken by the stenographer of the Court, April 26th, 1870:

Question by District Attorney.—Describe a case in which insanity may exist without delusion?

Answer by Dr. Vance. "Take the case of Reynolds. There was no delusion there; the man acted as a mere machine having no consciousness of his act, and when he comes to himself he has no recollection of what he may have done." Let me repeat here, that the example needs no comment and could not be more striking, although this unhesitating and spontaneous acknowledgement on the part of Dr. Vance comes too late to benefit the unfortunate Reynolds, but not too late to evince that in spite of public clamor and prejudices, truth prevails in the end, and that the question of epileptic insanity in Reynolds' case offers a very different aspect from that represented by Dr. Hammond.

Concerning the case of Chambers, I will simply remark, that notwithstanding the excessive public feeling against the prisoner, and the earnestness of the prosecution, it was impossible to produce one single witness—excepting Dr. Vance—who would not testify in an unequivocal manner as to Chambers' unsoundness of mind or delusions, and his frequent unprovoked violence, or dangerous conduct, before the homicide. The testi-

mony was of such an overwhelming character that the prosecution abandoned the case. One of the witnesses, Peter Hopkins, testified to having seen Chambers "perfectly deranged, his countenance worked with strong convulsive spasms, and he was turning around quite unconscious." From the facts in evidence, and the account Chambers gave me of the symptoms and feelings he experienced during his nocturnal attacks, in addition to his sudden unprovoked outbursts of violence, I came to the belief that Chambers was subject to epileptic insanity and so declared, urging most strenuously to the Court that he should be committed to a Lunatic Asylum, if found not guilty. The jury, without leaving their seats returned their verdict of "not guilty on the ground of insanity, and recommended him to be sent to a Lunatic Asylum." The court thereupon said: "We are perfectly satisfied that this man was insane, and that this insanity continues, according to the medical testimony, and our order is that he be confined in a Lunatic Asylum."

How significant the points that Dr. Hammond might have elucidated had he not had the misfortune to be prevented from getting to the court, and how much his evidence might have pressed home the conviction of the prisoner, setting aside the weighty proofs that convinced the court and jury of Chambers' irresponsibility, it is not in my power to estimate.* I find nevertheless, no

*"I was requested by the District Attorney to examine the prisoner, I did so, and found no evidence of epilepsy beyond the statements of Chambers himself. On his trial another physician testified to the presence of epilepsy. Through a misadventure, I did not get to the Court to testify, and the prisoner was acquitted and sent to the Lunatic Asylum at Utica. He presents no signs as I have been informed by Dr. Gray, of having any form of mental alienation or epilepsy." *Quarterly Journal of Psychological Medicine*, January, 1872. W. A. Hammond.

reason why so perplexing and so undecided a case, should be so readily disposed of and cited as one of simulated insanity. I am authorized by Dr. Gray to state that he has made no communication whatever in regard to Chambers, or touching his condition when he committed the homicide. I may add that, when Chambers was admitted to the State Asylum, he displayed not only a pearly appearance of the eye, puffy lips, and dull expression, but also the most intense lividity of the hands and feet, and this I notice, as consistent with the views of those who lay so much stress on objective signs as proofs of insanity. I visited in August the Asylum for Insane Criminals at Auburn and saw Chambers there. He exhibited a strikingly demented look, which has been particularly noticed by Dr. J. W. Wilkie, Superintendent of the Asylum, who informed me, that since Chambers' admission he has conducted himself very gentlemanly, although at times subject to nervous attacks, when he becomes excitable.

The opinion I expressed during Chambers' trial was mainly based on the testimony presented. I saw Chambers only once, the day before his trial, and could not have pretended to judge of his insanity, or mental state, on a single examination. I may be mistaken in having considered Chambers' case one of epileptic insanity, but I confess, that nothing has so far transpired to make me change my belief. The competent and leading alienists, who have had Chambers under observation, acknowledge that he is a dangerous man, but have not made public their opinion on his case. Leaving out of sight the real meaning of the expression "attacks" of nervousness, occasionally exhibited by Chambers now, there are one or two things at all events, which should not be overlooked; namely, the influence of incarceration and inforced abstinence from

liquor, to which Chambers had been addicted, and his quiet life in the asylum, all which should be taken into consideration, if we are to suppose that insanity might not recur in its previous form were Chambers to be released from the Asylum. One of the epileptics under my care at the Asylum, who indulged freely in drinking, without displaying any indications of drunkenness, was subject to fits of *grand mal* attended by delusions and violent mania, with homicidal impulses, followed by temporary aphasia. The fits with the maniacal paroxysms and delusions did not appear so long as the patient, confined at the Asylum, was deprived of alcoholics. He was finally discharged, apparently sound in mind, but, a few weeks afterwards, he was returned, having a series of fits—*status epilepticus*—which lasted two days and ended fatally in *meningitis*.

The evidence of several witnesses shows that Montgomery had unequivocal paroxysms of epilepsy or mental derangement throughout the week preceding the homicide, confirmed, besides, by the testimony of Dr. Hammond, who says, that "before the homicide Montgomery was in a condition of permanent insanity." "That his delusions were the result of paroxysms of epilepsy," because Dr. Hammond knows that "they very frequently lead to such manifestations." At each one of these periods of delusional excitement, it seemed that Montgomery "had suffered from a paroxysm of epilepsy, either of the *grand* or *petit mal*." Notwithstanding these open assertions in court, when coming subsequently to express his opinion about the nature of the homicide, Dr. Hammond concludes, that "*the circumstances of the affair are irreconcilable with the theory that the homicide was perpetrated during a paroxysm or an accession of epileptic mania.*"

Dr. Hammond, while testifying on behalf of the people, makes the following assertions:

"That patients committing acts of violence during epileptic mania, have apparently no motive unless it is a false one."

"That he has never known a case of an epileptic fit or seizure where, during the continuation of it, the party will be spoken to, will answer, and then relapse into the same condition, and being spoken to again will answer and relapse again."

"That deliberation takes away the idea of an insane act."

"In temporary insanity from cerebral disturbance there is no disposition to resist the impulse, the person yields to it and strikes."

"When an epileptic has suffered from an attack, the mental disturbance continues frequently several days."

I will not assail this medical testimony which served to convict Montgomery by pointing out its striking contradictions. I only desire to remark upon the above assumptions made categorically before the court, and in direct opposition to well-acknowledged facts concerning the medico-legal bearings of epileptic insanity, and of insanity generally.

Although it may appear futile, I can not help noticing the very prevalent fallacy, that motive and calculation necessarily imply free-will or soundness of mind. I will look at the point only in reference to epilepsy, and will bring forward the following examples, which need no comments:

A young lady, patient of mine, subject to attacks of *petit mal* and *grand mal*, followed by temporary mental disturbance, having remained for several weeks free from either kind of fits, was suddenly seized with four attacks of *grand mal*, within two hours, on a Saturday morning, as she was about preparing herself to go to a theatrical matine. She raved as usual after the fits, and had to be taken to her bed. She insisted upon being dressed to go out,

without, however, making any attempts to get up, and her mother endeavored to quiet her by kind promises and arguments. She became calm, and asked her mother for a glass of water, which was handed to her; on holding it she said: "Darling mother, let us cease fighting; come, do sit by me in this chair," and, as the mother sat down to gratify her daughter's wish, she gave her mother a violent blow with the glass on the forehead, wounding her severely, exclaiming, "Now, now, I am satisfied. Don't let me dress and go to the theatre." Thereupon the girl continued in a state of excitement which lasted until next day. This patient has not preserved the slightest recollection of the above circumstance, its occurrence has been even concealed from her, as she became deeply affected when she first noticed her mother's wound, and was told that she had inflicted it when laboring under one of her fits.

I could also cite other instances in my own practice, where the existence of a real motive prompted the act of violence during epileptic insanity, but I will let Delasiauve speak, there being no higher authority recognized on epilepsy:

"H—, who had been committed for insanity to Bicêtre, was again re-admitted after murdering his mother. At the trial, his counsel pleaded that he had been subject to transient aberration of mind, and listening to such a defence the court acquitted him. Epilepsy had not been suspected in his case, and at the asylum H— displayed all the time complete lucidity, with the exception of short occasional excitements up to his death, occurring long after his return to the asylum. However, certain circumstances in addition to the account of one of his relatives, disclosing the previous existence of nervous paroxysms, led me to trace his momentary aberrations, and therefore his overt acts, to previous nocturnal fits. The court, convinced that the criminal deed was due to mental trouble, proceeded very judiciously by substituting administrative incarceration for capital punishment. Had the above existence of the attacks been known, the magistrates might have felt more satisfied as to the equity of their verdict."

"There was a peculiarity of a nature to raise objections in this case, namely, that the murder had been perpetrated under the ruling of a jealous feeling, and even

with an apparent motive, wherefore it was fair to infer that independently of the morbid excitement, it might have been prompted by a natural passion and become thereby punishable. This consideration, notwithstanding its weight, is far from carrying a decisive value. The instinctive perversions, consecutive to the epileptic fits, do not, as we have already seen, necessarily deprive the overt acts of epileptics of the mark of a voluntary determination. These patients are controlled in the midst of their passions by an appreciable motive, which has for them a reality; but, we should ask ourselves, if in a state of sanity such a motive would arise, and above all if it would be predominant enough to control reason. Thus, the motive and premeditation which seem under such circumstances to have dictated the criminal act are insufficient to establish peremptorily the integrity of free-will, and consequently the existence of guilt."

"A young man, aged 28, committed to our hospital, eight months ago, affords a further proof of the above appreciation. Well-bred, educated, and belonging to a respectable family, he was condemned to two years' imprisonment for stealing a piece of dry goods from his employer at the instigation of his mistress. He was transferred to Bicêtre on account of the repeated epileptic fits he had in prison. We then learned that he had been for five or six years subject to epilepsy, and it soon became manifest to us that the deed which caused his imprisonment must have been the result of his mental trouble. There are, indeed, apparently two natures in this individual, or rather his life displays two distinct phases. One inclosed within the circle of about a week, before or after the attack, when he is capable of every imaginable misdeed. At times, the delirium breaks out under the form of incoherent or furious mania, but, in other circumstances, it is reduced to a display of exaltation compatible with a more or less regular coöordination of ideas. J—— shows himself irritable, imperative, gloomy, disposed to resort to violence, and intemperate. It is mainly at this time, while preserving sufficient lucidity to execute intentionally any act, that he fails, however, in the necessary discernment

to judge of its morality, as also in the necessary self-control to abstain from doing it. During the other phase, in some sort normal, the character exhibits quite a contrast in its physiognomy with the preceding; it displays the qualities proper to a man in full possession of his senses, and free from any extravagancy. The moral transformation coincides otherwise with very manifest physical changes, to wit: the ordinary calm expression replaces a wild or melancholic concentration of the features, lividity of the face and a kind of febrile movement."

"Lelut cites and comments upon an example analogous to the foregoing. Having discovered a prisoner at the Roquette, who had been several times convicted for numerous larcenies, and who had been subject to violent epileptic fits, attended with maniacal agitation, previous to the perpetration of the crime, Lelut does not hesitate to ascribe the latter to epilepsy. Such facts, says he, are frequent, and, if in this case, mania can not be considered as a persistent insanity on account of its shortness, one has a legal right to examine if such a serious and dreadful affection leaves, in the intervals between the accesses, sufficient lucidity for the judicious accomplishment of acts and for responsibility." (Delasiauve, *Epilepsie*, pp. 486-488.)

To remove all doubts on the important point under consideration, Falret says: "The very great clearness of ideas which these patients (epileptics) occasionally display between their attacks, the words coherent enough which they pronounce, even in the midst of a great disorder of movement, the *premeditation*, the *calculation*, and the *motives of revenge*, that in some rare cases, control the accomplishment of their misdeeds, might lead the magistrates to erroneous views on the morbid nature of such actions, if instead of regarding the whole symptoms of the disease, we confine ourselves, as is very often done, to discuss the motives and details concerning the special act which is the object of medico-legal examination."

Moreover, since facts are mightier than arguments, I may yet present the following remarkable instances, evincing unquestionably, that the acts of violence perpetrated by epileptics during their insanity may acknowledge a real motive. I copy them from the standard work of Legrand du Saule, "*La Folie devant les Tribunaux.*"

"Josephine D——, subject to epilepsy attended with imbecility, enticed a little girl to accompany her to the fields, where she choked her, having squeezed her to death with her hands, and stole her gold ear-rings. Josephine was acquitted by the Court of Assize at Laon."

"B. P., very gentle and very intelligent, was seized with epilepsy, at the age of fourteen, upon fright, and his intellectual faculties failed considerably, as it usually happens with such unfortunates when the fits become violent and repeated. Scandalized at the nice attire of a young girl of fifteen, he struck her with a sickle he was holding, and almost beheaded her. B. P. was cleared from prosecution on the grounds of being affected with epilepsy and furious dementia."

"The woman Giraud had married a miserable man, who treated her indignantly, and who afterwards died at the bagnio, having been condemned to penal servitude for life, being an accomplice in a crime of poisoning. She was, about three years before, struck on the right temple with a billy by her husband, and thereupon became subject to epileptic fits. From that time also, and mainly after her husband's imprisonment, which took place about the same date, this woman lived miserably, being obliged to dispose of, or almost to give away the small stock of moveables she owned. She received for these objects the price stipulated upon, but she pretended the buyers had cheated her, or had not paid her in full, and she haunted them in her constant besetting way. She then gave herself up to stealing, under the pretense of making good her loss, and was on three occasions condemned by the correctional police. Finally she set fire to a neighbor's barn, whom she pretended to be her creditor, and who had testified against her in one of her trials for larceny. When the Mayor, who instituted the judicial proceedings concerning the above arson, called on her, she was found rolled up in the bed covers, but as the Mayor knew all the oddities of her character, he declined to examine her, feeling

already satisfied that he would not obtain any sensible answer. She was arrested, a few days after, in an uninhabited house, where she had sheltered herself against the pursuit of the gendarmerie."

Dr. Grenet, Physician to the Hospital at Barbezieux, commissioned by the Court to examine and report as to the mental condition of the woman Giraud, presented a very able and judicious report, with the following conclusions, preceded by these remarks:—
"Delasiauve, who is one of the authorities on the subject, says: 'Epileptic susceptibility does not only serve to help wicked propensities, but may of itself put them directly into play, by raising up or inspiring the idea of the misdeed, thereby driving fatally to its execution.' "In summary, since the maniacal excitement of epileptics disturbs to such a degree the soundness of the cerebral functions, that it may originate a confusion of the knowledge of right and wrong; and, as the woman Giraud has obviously displayed, on several occasions, symptoms of maniacal excitement, I do not hesitate to conclude:

"1st. That the woman Giraud is epileptic; her attacks, varying from simple absences to falling paroxysms, are very frequent.

"2d. The criminal actions imputed to her are probably due to this disease. To guard against their recurrence, I believe that this woman should be placed under surveillance in a work-house."

On the strength of this report the Court of Bordeaux rejected the indictment. Let me, before disposing of the subject, bring to notice the following case, reported by Boileau de Castelnau, and worthy of being kept in mind whenever we are called upon to determine the limits of the responsibility of epileptics:

"John Paul J—— and Charles F——, both convicts in the Central Prison of Nismes, had for a long time lived on bad terms with each other; on several occasions, and notably the 23d or 24th of June, 1850, they engaged in a passionate quarrel, during which John Paul addressed bitter and even injurious reproaches to Charles; but, up to that time they had not gone beyond a mutual exchange of words more or less foul or insulting. The 29th of June, during the forenoon, a new quarrel on some insignificant subject broke out between the two convicts, *after which Charles was seized with an epileptic fit*, a disease to which he was subject. During the fit, Charles seeing John Paul laugh, thought that he made a jest of his disease, and this belief tended not only to increase the irritation left on his mind by the previous quarrels, but also to complete the measure of his exasperation. Thinking that the knife he possessed was not suitable to carry out the plans of revenge he contemplated, he exchanged it for another belonging to an Arab, named Mahomed-ben-Ab, and who like himself was a prisoner. Shortly after this exchange the accused was seen twice sharpening the blade of his knife, with the file he had borrowed from another Arab. It was then about three o'clock in the afternoon. Towards five or half-past five o'clock, John Paul saw the accused advancing towards him, and noticed that he kept his hand in his bosom, where he seemed to handle some object. Charles, on coming up to him, asked why he made a jest of his disease, and as John Paul returned a negative reply, he proposed to him to fight. John Paul refused doing so, saying, that he did not want to fight a man like him, adding, *that he excused him on account of his disease*. After these words, John Paul was about turning to go away, when Charles suddenly rushed upon him, and drawing the knife from his bosom, rapidly inflicted *six stabs* on him. The most dangerous one was inflicted in the region of the heart, the internal mammary artery having been wounded; the first diagnosis of the physician was that the wound would probably prove fatal, a prediction which was not, however, realized."

I pass over the lucid examination of the facts, to present Boileau de Castelnau's conclusion:

"From the facts reported, Charles exhibited the characteristics of a derangement of the intellectual and affective faculties, induced by epilepsy, the attacks of which were frequent and of long standing. In one word, one

can not avoid this dilemma: either Charles had been impressed in an unnaturally morbid manner by the insults of his antagonist, insults which superinduced an epileptic fit, during which he was again no less unnaturally influenced by the laugh of the same antagonist, both circumstances driving him to a wicked vengeance and making him (Charles) act the part of a madman; or again, Charles was impressed normally, but the consequences of his feelings were the acts of an insane man: *cæteris consentibus* ‘the loss of moral liberty is incontestable.’ He had no motive to kill John Paul, and to slay him by such a number of stabs.”

The moral irresponsibility of Charles was pleaded most eloquently by Frederick Nicot, and the jury on finding Charles guilty of an attempt to commit wilful homicide on the person of John Paul, also admitted the extenuating circumstances. The Court, on the demand of the defence, lessened by two degrees the sentence, and Charles was condemned to six years’ imprisonment. Boileau de Castelnau remarks: that the conviction was obtained upon subsidiary circumstances connected with Charles’ antecedents, it being manifest that the Court and jury were convinced, if not of the moral irresponsibility of Charles, at least of the want of control of his free will at the moment of perpetrating the crime.

Is it true, as stated by Dr. Hammond, that in a case of epilepsy, during the continuation of the seizure, the party will never answer if spoken to and then relapse into the same condition, to answer and relapse anew if being spoken to again? I will once more let the examples speak for themselves in reply to this assumption, beginning by the case presented with so much propriety by Dr. Gray for the consideration of the Court.

An epileptic, who had been fourteen months in the State Asylum at Utica, was subject to maniacal attacks, and for some time had been in the convalescent ward. One evening, when about to retire, he refused to take his medicine, alleging that it was poison, and looking at his watch, said: "I only have half an hour to live." He refused also to undress and go to bed. Dr. J. B. Andrews, [then the attending physician, to whom I am indebted for these details,] being called, found him sitting by the bed with his watch in his hand. He instantly accused the doctor of poisoning him, and persisted in his assertions, until finally, he seized a chair and struck at one of the attendants who was sitting in the ward. He became boisterous and when asked to go to another ward, he vehemently declared he would not go. Several attendants were called, and on seeing them, he calmly and deliberately acknowledged that it was a useless attempt to oppose so many, but that on submitting himself against his will to their superior strength, he would have to be carried, which was done. He continued more or less excitable through the night, but appeared quiet the next morning. The next day when the Dr. was in the ward, the patient referred with regret to the occurrences of the previous evening and apologized for his conduct; then started down the ward and fell in a convulsive fit, fracturing the right ulnar bone. For three succeeding days he was quiet but moody, even made some pertinent suggestions as to the dressing of the fracture, took his medicine and food regularly, and seemed to appreciate his surroundings and condition. On the fourth morning upon awakening, without any noticeable change or recurrence of fits, he inquired why his arm was bandaged; the attendant told him because it was broken. When the physicians came on the ward he asked them when and how his arm had been broken, declaring that he had no recollection whatever of any of the events from the first evening of excitement preceding the convulsive fit to that date, and was thereafter never able to recall any of the incidents happening during those four days. The foregoing principle could not be more completely upset than by this case, which is far from being unique.

One of the epileptics at the New York City Asylum, during a paroxysm of insanity succeeding several fits, struck and severely wounded one of the attendants simply for going to the rescue of another epileptic, who became so very violent that he had to be removed from the rest of the patients. I saw the above epileptic a few minutes after the assault in question; he was in a very ex-

citable condition, but he talked to me, and rendered a very distinct account of his motive for assaulting the attendant: he even described very minutely the persons who took hold of him to bring him to the room where he was. He continued excited throughout the night and the subsequent day, after which he had a very vague idea of the circumstances just reported.

Another epileptic after his nocturnal attacks, harrassed by hallucinations, sees a man in the corner of his room, and begins to cry in great fear and distress. This condition continues sometimes for several hours. When spoken to he answers, often recognizes for a while the error of his delusion, and becomes comparatively quiet; but no sooner is he left alone, than he again falls into the above state of anxiety during which he has, in addition, short convulsive paroxysms.

Similar to Dr. Gray's case is the following under my own observation: A young man fell from the top of a ladder fifteen feet high, and became epileptic thereafter. He would while in conversation, stop suddenly, his head would drop, looking as if dead, but would regain consciousness in a few seconds, entirely unaware of his condition. One evening, after one of these attacks, he went into the street, took a horse and buggy which he found in front of a house, rode over a mile and a half to his father's grave, pulled the flowers from the bushes planted over it, and brought them home to his mother, whom he invited to take a ride. Being asked where he procured the horse and buggy, he replied that he found them lost in the street. His mother directed him to go forthwith to a livery stable and there leave the horse and wagon that they might be returned to their owner. He started to do so, but left the horse and buggy for keeping at a livery stable as his own. When discovered by the owner, the transaction was looked upon as a larceny, thereby causing great mortification and annoyance to his family. The boy, however, could never account for his conduct, and completely forgot every circumstance connected with it. On another, more recent occasion, he left home after the attack, and while wandering through New York, he came across a sailor's agent, who engaged him to go as a sailor on board an English vessel starting for London. The agreement was signed and, after leaving almost all his pay and some of his personal effects, he embarked for England. The captain discovered from the start that he was no sailor, and finding him very flighty, exempted him from going to the top of the masts, and assigned to him very light duties. A few days after his departure, on coming out from his state

of epileptic insanity, he expressed great surprise at finding himself on board a vessel bound for London, and completely ignorant how he came to be on board. The mother discovered through the police the departure of her son, and took the necessary steps to have him brought back. He has similar attacks of insanity after nocturnal paroxysms, or fits of *petit mal* as described above, but is quite rational and gentle in the intervening periods between the paroxysms, which render him very mischievous and inclined to be constantly running or wandering about. He is also given then to violence, and if he had committed a crime during any of the attacks here narrated, would he have been deemed responsible for it?

The following case, related by the celebrated Troussseau, is too important to be passed unnoticed.

"A young man, whilst on his way to the Palais Royal, in company with some friends, with whom he is going to dine, suddenly falls down on the "Place Louvois," but soon gets up again, and rushes on the passers by, striking them with violence. He is taken to the police station and for some time keeps insulting the soldiers who hold him, and spitting in their faces. Now had there been no witness of the epileptic attack which had preceded this extraordinary scene, and had not the physician who related the fact to me, interfered, the young man would have been tried for rebellion against the police authorities. It would be easily conceived, adds Troussseau, how difficult it is to arrive at the truth, when the epileptic and the victim of his violence are quite alone."

One of the most remarkable instances of the condition in which the mind may remain during epilepsy, has been communicated to me by Professor John Ordronaux.

A German gentleman, aged 35, suddenly and during the high heat of one of our hottest summers, was attacked by a characteristic epileptic seizure, from which he soon recovered, but with evident symptoms of consecutive mania. Having been placed under medical treatment he continued to exhibit recurring attacks of epilepsy, the disease not yielding in intensity of seizures, although their intervals were beginning to be prolonged. This state of things continued for about six months, when one morning immediately upon rising, he was seized with convulsions of great violence,

which were repeated seven times, the whole period of the *status epilepticus* occupying about twenty minutes. From the last seizure he never recovered, but passed at once into a state of coma which lasted four days. At first there was strabismus of both eyes, with dilatation of pupils, cold, clammy skin, and feeble respiration. No involuntary evacuation occurred during the attack, nor was there ever any indication of paralysis of the sphincters. Iodide of mercury was administered internally, and epispastics applied to the spine. There was evidence that the former acted within twenty-four hours, as the strabismus disappeared; the skin also showed normal sensibility under the action of the vesicant, although in other parts of the body touching and pinching did not provoke apparent pain. During these four days the patient was fed regularly, was lifted from bed, and being put upon his feet, passed his urine freely on being told to do so, and a vessel presented to him, and even watched the process of micturition so as to avoid wetting himself. Being replaced in bed he would follow with his eyes persons moving about the room, and stare at any one who loudly pronounced his name, for he could not hear ordinary sounds, and while his mind remembered automatically his name, he neither spoke nor evinced any expression of pain, or pleasure, or consciousness at the endearing appeals of his wife or mother, who hovered for hours about his bed side. It was evident that while his mind was enveloped in a haze of confusion produced by the shock of his epileptic paroxysm, it still worked clearly on a lower plane of introspection, sufficient to enable him to perform certain self-regarding acts, and even to regulate them by conventional standards, become habitual. But, outside of these, he knew no one individually, and had lost all conception of his relation to any being or thing distinct from himself. He was in fact mentally cataleptic.

"Deliberation takes away the idea of an insane act," says Dr. Hammond. "In temporary insanity there is no disposition to resist the impulse." I can not see on what grounds rest these assertions of so great importance to the fate of Montgomery, for most, if not all alienists have now agreed that deliberation is not incompatible with insanity. "What must be thought," says one of our highest authorities on medical jurisprudence, "of the attainments of those learned authori-

ties in the study of madness, who see in the power of the systematic design a disproof of the existence of insanity, when, from the humblest menial in the service of a lunatic asylum, they might have heard of the ingenuity of contrivance and adroitness of execution, that often characterize the plans of the insane?" And, the first example which falls under our eye in the standard work just quoted, is that furnished by Erskine, of a young woman indicted for murder, who was acquitted on the ground of insanity. "It must be a consolation," Erskine says "to those who prosecuted her, that she was acquitted, as she is at this time in a most undoubted and deplorable state of insanity; but I confess, if I had been upon the jury who tried her, I should have entertained great doubts and difficulties; for although this unhappy woman had before exhibited strong marks of insanity arising from grief and disappointment, yet she acted upon facts and circumstances which had an *existence*, and which were calculated, upon the ordinary principles of human action, to produce the most violent resentment. Mr. Errington, having just cast her off and married another woman, or taken her under his protection, her jealousy was excited to such a pitch, as occasionally to overpower her understanding; but when she went to Mr. Errington's house where she shot him, she went with the express and deliberate purpose of shooting him. She did not act under a delusion, that he had deserted her when he had not, but took revenge upon him for an actual desertion."—(*Ray, Med. Jurisprudence of Insanity*, Fifth Edition, p. 38.)

In making such a positive declaration in regard to deliberation, Dr. Hammond is from the beginning in direct contradiction with doctrines he has sustained elsewhere. When cross-examined by the District At-

torney in the McFarland trial, Dr. Hammond asserted that—"the insane are very persistent in their revenge. I have known insane men occupied with the idea of killing their keeper for years, and finally do it." And, what were the circumstances attending the preparations to perpetrate the murder in McFarland's case? I avail myself of the graphic account given by my learned friend, the Hon. Samuel B. Garvin.

"When McFarland arrives at the City Hall Park he sees that the time has not yet arrived. The town clock stands there, illuminated, and he sees the time has not yet come, and goes into the office of Mr. Noyes, the lawyer. From there he goes to the *Tribune* office. He never speaks to a human being. He tells no story of his wrongs. He does not talk about his boy. He says not a word about Richardson. He does not inquire for Mr. Sinclair. He walks still and quiet, behind a desk, with a glass partition through which he can look, and which commands a view of both doors and nearly the whole office. What is he doing there at that time in the afternoon? It is almost dinner time, and he lives up town. He has no business on earth in the *Tribune* office at that hour, and yet there he is, waiting *ten minutes, as two witnesses testify*, to see Richardson come in. Is this design? Is this premeditation? We see that he had motive for revenge, and anger and wrath against Richardson. Here is the plan being slowly developed by which his adversary is to go into eternity by the pistol of this man. He waits ten minutes. Richardson comes in; not having spoken to any one, McFarland leans forward, as one of the witnesses says, puts his pistol within three feet of Richardson, and fires it. The deed is done. What did he do? * * * The next that is heard of him, about 8 or 9 o'clock in the evening, he is at the Westmoreland Hotel, and you have not heard one word on the subject of his pistol from that day to this."

If I have refreshed the reader's memory in regard to these details, it is not to argue the question of McFarland's insanity, but to show the length of the premeditation and its nature in one of the most typical cases of *emotional insanity*, as pronounced by Drs. Vance and Hammond who appeared on behalf of the prisoner. In

this case two witnesses testified that McFarland was waiting *ten minutes* for his victim; whereas in Montgomery's case it is the weak-minded epileptic, Montgomery himself, alone, who, in his insanity, says "that he waited five minutes to kill his wife, because his temper got the upper hand of him." If such assertions are to prevail, if insanity, whether it be of an epileptic or of any other nature, must preclude every attempt at design or premeditation, we may as well reject every other principle equally confirmed by every day's observation of the insane, and by the numerous examples cited in the annals of insanity and medical jurisprudence in our country and abroad. Instances have been already presented here, of unquestionable epileptic insanity, where the design or premeditation to execute the deed has been apparent, but yet insufficient to render the individual accountable for the act. I may further cite the sad case of the epileptic who murdered Dr. Geoffroy, Superintendent of the Lunatic Asylum at Avignon:

The patient was subject to fits preceded by a feeling or *dream*, as he called it, starting from the abdomen to reach the brain. He had also vertigo and the fits were attended by furious delirium. On one occasion, after a fit, he attempted to murder his father. On another he threw himself out of a window. He was quiet, orderly and of a gentle disposition. Two days before the murder, he met Dr. Geoffroy and, tendering the hand, he said to him, *Union*. The doctor, without paying much importance to the word, asked him if he belonged to any secret society, and thereupon kindly referred him to the assistant physician for anything he might desire. He became gloomy thereafter. Went to the kitchen, very restless, told one of the Sisters of Charity, that he was very unfortunate, and asked the Mother Superior for a prayer book; but as he was a protestant, she would not comply with his wishes without the previous authority from the Superintendent. Nothing remarkable was further noticed that day, and he passed a quiet night. The next day he went out of his ward; at noon called on the director, to whom he made the same remark addressed the previous day to Dr. Geoffroy, and held very little communication with any person

throughout the day. On the following day he started early for the workshop; waited for Dr. Geoffroy in a vestibule between the shop and the doctor's office, and as the doctor delayed his visit, he became impatient, and calling on the director he inquired after the chief physician, pretending to be sick. He was then informed that the doctor had just arrived and was visiting the wards. He waited at the door of the doctor's office, alone, in the position of a man suffering from a hurt, leaning on the left leg with the right hand concealed on the chest under his vest. He addressed himself to Dr. Geoffroy without changing his position. The doctor, without mistrust, approached, and no sooner had he stooped to examine the cause of ailment than he firmly surrounded the doctor's chest with his left arm, and suddenly stabbed him in the left side of the chest with a pair of shears, the blades of which he had fixed in a crossway by tying them firmly with a pocket-handkerchief. He subsequently became furious, and the doctor died one hour and a half after.

As Dr. Laurent remarks in the interesting report from which the foregoing facts are abstracted: "This melancholy event furnishes a proof of the possibility of momentaneous disturbance that may originate from the mental state of that so-called ephemeral loss of free-will, a proof of the derangement of all that seems most steady within the sphere of affectivity, of the extent of such morbid phenomena, and the consequences they may entail. It shows an individual who had always displayed the best proclivities, industrious, gentle, obliging, grateful, and on whom evil propensities suddenly took the ascendant, driving him to commit such a hideous act as murder. In this instance, as already shown, the intervention of intelligence, the assistance of the intellectual operations, and of the will can not be denied. The combination of ideas that the patient conceived to obtain his end, the plan he devised to succeed, are elements of evidence which speak for themselves. *Premeditation* could not be denied here; but it would be impossible to admit any power of judgment. The struggle which

took place within himself, and which he communicated to nobody, (a silence that may be ascribed to the natural pride and high ideas he entertained of himself,) had no more witness beyond an unsound reason incapable of reaching impartial decisions. The moral conscience being deranged, every resistance on its part to the most evil impulses was rendered impossible, and within the space of a few hours this lesion originated, to persist for a certain time and disappear, and to recur thereafter at intervals of variable length. Subsequently, this murderer would feel remorse and regret for the physician whom he loved and killed; while under morbid influences, he would be on the contrary controlled by homicidal impulses and would approve of the crime he had committed. What a lesson does this dreadful event teach to specialists, to medical witnesses who are to guide the judgment of the courts, and to magistrates called upon to pronounce themselves on the motives of the most extraordinary deeds!" (*Baillarger, Archives Cliniques des Maladies Mentales et Nerveuses.* Tome I., p. 222.)

As to the statement that "in temporary insanity there is no disposition to resist the impulse, the individual yields to it and strikes;" this testimony is completely nullified by numerous irrefragable cases. Everybody knows the frequency with which the insane will resist, not for days but for years, their impulses or delusions. It would be wearisome to detail the numerous examples contained in our standard works on insanity and medical jurisprudence. Esquirol, in his monograph on Homicidal Insanity, the first written and to this day a model one, establishes: "That all homicidal insane have a motive known or acknowledged, they obey a reflected or even a premeditated impulse," and on classifying them Esquirol forms

a class embracing: "those who have no known motive, at least one can not suppose in them any motive imaginary or real; the unfortunates falling under this heading are driven by a blind impulse which they resist and escape from their evil impulses."

A patient of mine, recently dead, was affected with *petit mal* and nocturnal attacks since the age of puberty, the latter occurring unsuspected for a long time. He was besides subject to attacks of epileptic insanity, connected with the fits, and lasting from one to ten days. He would through them become aphasic, melancholic and driven constantly to kill his mother, when not becoming violent and boisterous. He went abroad expecting to overcome his disease by change of climate and surroundings, but returned unimproved. He would earnestly entreat his elder brother to avoid his sight while he was affected with his fit. Another curious feature in his case was, that he played the piano with great taste and skill, and during the fits of *petit mal* he would continue playing the most difficult pieces without ever an interruption, but would twist his head around indicating by this manner that he was seized with a fit of *petit mal*. When insane he would sit for hours playing the piano, having a succession of fits of *petit mal*, until he would rush on any of the bystanders, and so much bewildered and violent was he then that he had to be restrained. He died from meningitis after a series of fits.

Need I reproduce the cases so familiar, cited by Gall?

An epileptic, while the fit was threatening him, experienced for several hours before its outbreak, an irresistible impulse to murder, and begged to be restrained and chained, and would cry out to his mother to save herself. He preserved his consciousness during the attack, and knew perfectly well that in committing a murder he became guilty of crime. When the fit was over he asked to be unbound and rejoiced that he had killed nobody.

A young woman would not bathe her child, or would not enter her husband and children's chamber if they were asleep, and would even throw the key of the door away, to prevent the possibility of re-entering it and being overpowered by the impulse to kill them which would instantly seize her.

No less striking are the examples reported by Marc; one, that of Humboldt's servant, who preferred to leave

his house, lest she would not resist the overwhelming impulse to tear Humboldt's child into pieces on being struck by the whiteness of its flesh on undressing it; and the other case, that of a young lady, who would entreat to have the straight-jacket put on, and to be closely watched until the motiveless homicidal desire, which she experienced sometimes for several days, would have passed; and, again the case of that chemist and poet who would request to have his thumbs tied together to prevent the sudden homicidal impulses—once carried to execution in a murderous attempt against his attendant—and who finally died in a paroxysm of furious mania.

A very similar occurrence to this latter is illustrated by Bucknill, in a case under his observation at the Devon County Lunatic Asylum. The man, to avoid the murderous assault to which he felt himself urged, often requested to be locked in his bedroom, and still more frequently tied his own hands together with a piece of pack thread, which he could have snapped with the greatest facility, but which he said enabled him to resist the temptation. (*On Criminal Lunacy*, 2d edition; London, 1857: p. 90.) In 1805 a man was tried at Norwich for wounding his wife and cutting his child's throat. He had been known to tie himself with ropes for a week to prevent his doing mischief to others and to himself. A man exposed to a sudden reverse of fortune was heard to exclaim, "Do for God's sake get me confined, for, if I am at liberty, I shall destroy myself and my wife! I shall do it unless all means of destruction are removed; and, therefore, do have me put under restraint; something above tells me I shall do it—and I shall."—(*M. B. Sampson, Criminal Jurisprudence considered in relation to Mental Organization*; London, 1851: p. 9.)

The case related in Knapp and Baldwin, (v. Newgate Calendar,) and quoted by Ray, resembles in its prominent features one of nocturnal epilepsy, though not so presented.

A man after reading the indictment of Henriette Cornier, would awake suddenly in the course of the night with the thought of killing his wife, who was lying beside him. He left his wife's bed for a time, but within three weeks the same idea seized upon his mind three times, and always in the night. With the exception of light headaches occasionally, he had always been well and free from pain. He was sad and troubled about his condition, and quitted his wife for fear that he might yield to the force of his desire.

A lady, says Falret, (*Leçons Cliniques*, 1864, p. 159.) began to experience, without any cause, a sudden overwhelming desire to ill-treat her aunt, whom she loved dearly, and after these fits of frenzy would become ashamed of herself and attempt suicide.

Was not that a disposition to resist which prompted the man, cited by Guislain, to amputate his arm, to withstand the impulse to murder his wife, to which he was violently driven?

A young lady is seized with the evil impulse to kill her governess, to whom she is, however, deeply and gratefully attached. The idea oppresses her, increasing in degree, until she loses all rest. She takes care that knives, scissors, or even knitting needles, should be kept out of her reach; but she was not cured until after undertaking a journey through France and Italy, by the advice of Brierre de Boismont, who mentions the case. (*Annales d'Hygiène et Médecine Légale*, October, 1862, p. 457.)

In two out of the nine cases of homicidal mania, reported in Paul Jacoby's interesting thesis "on Impulsive Monomania," the oft-repeated homicidal impulse

could be completely overpowered. In one instance, there was a sudden return of discernment while the murder was being perpetrated, and the man upon inflicting a wound, not dangerous to a child, went and gave himself up as a prisoner.

Finally, I will allude to the case of the young student at the Seminary of Aix, who stabbed another student while asleep. He was placed under the observation of the celebrated Dr. Aubanel, of the Lunatic Asylum at Marseilles, and Dr. Cavalier, of the Asylum at Montpelier. Cavalier believed him to be in a condition approaching general delirium; and Aubanel was led to admit the existence of monomania. Upon a full and careful investigation of the facts connected with the case, Aubanel arrived among others at the following conclusions:

"That the homicidal propensity became at last so strong that after protracted resistance he was on the eve of yielding to it; it was then that he attempted suicide, and armed himself with a sword to carry the idea of murder into execution. The accused was not of sound mind for a long time before the murder, he was insane on the day and at the moment of perpetrating it, *not forgetting that he premeditated the murder for ten or twelve hours.* (*Journal of Psychological Medicine*, April, 1850, p. 252.) Delasiauve, in a most interesting report on this case, read before the *Société Médicale du Pantheon*, takes a view altogether different from that of the alienists above named. Delasiauve states in a manner very forcible and bearing no less strongly on the case under consideration: "It is certain that on passing by an epileptic we elbow one who might be an assassin, and that epilepsy, through the fancies more or less delusional that it originates, furnishes a considerable share of the crimes reported by the daily press and ascribed to

mental alienation. I should not, be surprised therefore, if such were the cause occasioning the homicide at Aix, because, in addition to the nervous susceptibility noticed during infancy, the reports of my colleagues point out, during the very year of the homicidal attempt, two convulsive fits of a suspicious nature." (*Journal de Médecine Mentale*, Tome IX, p. 245.)

"When an epileptic has suffered from an attack, the mental disturbance continues frequently." In making this assertion Dr. Hammond retracted the opinion he expressed to the District Attorney for the City and County of New York concerning John Reynolds, when Dr. Hammond emphatically said: "The disease, (epileptic mania,) is of remarkably short duration. There is not a case on record where it has lasted fifteen minutes, and it always comes on just after a fit. If Reynolds had had a paroxysm immediately before his entrance into the shoemaker's shop, whence he stole the knife, it would have been perceived by numerous persons in the crowded thoroughfare through which he passed." How can we bring the foregoing assertions face to face, and which of the two should be regarded as the correct one? The answer is of momentous importance, for on the faith of one, Reynolds was executed to vindicate the law, and on the strength of the contrary opinion sentence of death hangs over the head of the epileptic Montgomery!

Having referred to the most prominent points in evidence on the trial of David Montgomery, I must bring this review to a close. The responsibility of epileptics, or rather epileptic insanity, is a subject which seriously attracts the attention of alienists, and is frequently discussed in criminal cases. Delasiauve, Falret, Morel, Baillarger, Troussseau, and other no less high authorities, have described the characteristics of this condition, and

made manifest its real existence; but, while objective symptoms and scientific principles, distorted or stretched to the utmost limits are allowed to prove the existence of transitory mania, or any other form of insanity, the clouded state of mind attending epilepsy, the positive phenomena of cerebral or larvated epilepsy, and the commission of a crime under such insane conditions, are rejected as a refinement of moral diagnosis. Delasiauve, on reviewing the question of Dangerous Lunatics, discussed before the Medico-Psychological Society of Paris in 1867, says: One is never more affirmative than on matters he is ignorant of:—we should not, therefore, be surprised at the theories advanced in reference to questions concerning epileptic insanity, which is particularly studied by few physicians. Bearing these facts in consideration, we should not be surprised at the light in which epileptic insanity is looked upon, and to find the proof of its existence left entirely dependent on the eloquence displayed in its advocacy, and above all on the degree of public feeling concerning the prisoner.

To those who deny the existence of epileptic insanity, namely, a more or less prolonged deranged condition of mind, either preceding, following or replacing the epileptic paroxysm, no argument could be presented of more force than the practical study of epileptics. I am very far from thinking that every epileptic should be considered insane or irresponsible, any more than I would regard every individual as an epileptic who has had a single epileptiform convulsion. As I have before asserted, chronicity to my mind is as essential as any of the other characteristic phenomena of epilepsy; and I would refuse exculpating any overt act attributed to epilepsy, unless committed in a clear relation with the attacks, or while the perpetrator exhibited signs of cerebral epilepsy.

There is no period or limit fixed for the disturbed condition of mind following the epileptic attacks. The Roman laws, in Zaccchia's time, declared epileptics irresponsible, *i. e.*, having no free-will, for three days after the attack. No provision of the kind has ever been made by the French Code, nor by any other laws, excepting certain local ones in Germany, according to Boileau de Castelnau. That the limit of duration within which epileptic insanity was encircled by the Roman legislators, was a very narrow one, over and over again contradicted by experience, is a fact mainly accounting for the little attention which has usually been paid by the French courts to the above article of Roman medical jurisprudence.

Duration, frequency, and the hereditary nature of the attacks, are the most important etiological elements of epileptic insanity. The relations between the former conditions and the latter are manifest by the statistics of those who have studied the subject practically and by my own. There is one circumstance, ordinarily misunderstood, namely, the meaning of unconsciousness in regard to the different phases of the epileptic malady. It is usually supposed that unconsciousness means insensibility; and that, therefore, epileptics should be in a state of inability to speak or answer, or to notice what transpires around them during their seizures, and hence the prejudice against admitting that criminal epileptics have no mental perception of deeds perpetrated by them in a condition of epileptic insanity. The fallacy of this belief is quite obvious, for, the same condition is not exclusive to epilepsy, but is generally common to other forms of insanity. Normally we can not control reflex actions, whereas in epilepsy the reflex faculty of the nervous system is carried to the highest morbid pitch, and hence the extremely violent

and uncontrollable reactions peculiar to the disease. In epileptic insanity reason goes astray; the feelings, perceptions, and will of the patient are deranged; there is, indeed, a nervous susceptibility, a condition of extreme general hyperesthesia, ready to react on the least moral or physical incitation; and yet we can not say that the individual is completely deprived of his free-will or discernment any more than in any other kind of insanity. As Albert Lemoine asserts: "We should avoid to affirm or even to suppose, that the mental state of a madman consists in his completely losing full possession of his faculties. He who has lost his free-will is undoubtedly insane, and his insanity reaches the highest degree; but it does not follow therefrom that a patient must necessarily appear divested of all free-will to be pronounced insane. Even if insanity consists of a derangement of the will, it is far from being a settled question, but, on the contrary, one yet to be decided, whether full possession of our faculties might not coexist to some extent with insanity, and to what degree or under what circumstances—as in organic diseases—the disorder of sensibility, the delirium of the intelligence might lessen or keep under, without suppressing entirely, the free-will of the insane."—(*L'aliéné devant la Philosophie et la Société*, p. 272.)

In regard to the changes undergone by the moral and intellectual disposition of the epileptic, they take place generally even before insanity can be confidently declared. Esquirol points them out distinctly and remarks—that epileptics have exalted ideas, that they are very susceptible, irascible, obstinate, difficult to please, capricious, odd, every one possessing some peculiarity of character. Calmeil states, that all epileptics not yet insane are very irascible, very impressionable, and disposed to false interpretations: that which scarcely

moves a man of ordinary susceptibility causes in them a feeling of profound trouble. After alluding to the opinion of the above and other authors, Baillarger declares: "That epilepsy, before leading to complete insanity, produces very important modifications in the intellectual and moral condition of certain patients; these sufferers become susceptible, very irritable, and the slightest motives often induce them to commit acts of violence: all their passions acquire extreme energy." (*The Responsibility of Epileptics. Medical Critic and Psychological Journal*, Vol. I., p. 510.) Delasiauve says: "Epilepsy in particular exposes people to dangers the gravity of which is not sufficiently appreciated. * * One is never in safety with epileptics." (*On Dangerous Lunatics. Journal de Médecine Mentale*, Tome X., p. 20.) Nothing, however, gives a more comprehensive idea than Legrand du Saule's words: "Everything is contradiction with the character of epileptics; nothing could be equal to the frequency, rapidity, and excessive change of the contrasts they exhibit." (*La Folie devant les Tribunaux*, p. 367.) I think that I need insist no longer on the deep mental and moral change which epileptics generally undergo through the active progress of their malady. As intellectual impairment is admitted by all authorities on the subject, which by degrees more or less imperceptibly undermines the instincts and emotions, and draws the individual towards depravity, therefore epileptics should always be looked upon as dangerous. And, because Mahommed, Socrates, Caligula, Cæsar, Charles the Fifth, Napoleon Buonaparte, and other geniuses were subject to epileptic paroxysms, as history tells us, are we therefore forced to conclude, that epileptics should not be considered irresponsible, when displaying evidences of epileptic insanity? One of the

most demented epileptics under my care, with an inherited predisposition to the disease from his father and mother's family, and epileptic since his infancy, exhibits for a day or two a remarkable remembrance of events that happened long before, and talks in a bright manner, which disappears upon the return of his nocturnal fits. During this stage of his malady, he violently strikes those who go near him, if his wishes are opposed; he also becomes very mischievous, and has an obstinate determination to evade vigilance and to run away from the house. Should he be judged in these lucid intervals—when his morbid impulses render him so dangerous—more responsible than in his harmless habitual state of complete dementia? There is a broad and obvious difference between a man who has had rare or even numbers of epileptic fits at long intervals during his life, and one whose physical and moral constitution is deeply tainted by a hereditary predisposition to epilepsy, who becomes impressed by this latter in a prolonged and frequently repeated form, and whose weak intellect—in regard to morbid impulses—is, to all appearance, in the words of McIntosh, "little deranged, while lurking in the secret recesses of the brain, there lies some sweeping moral defect or perversion, which only requires its peculiar stimulus to be excited into active mischief." (*On Morbid impulse. Medical Critic and Psychological Journal*, Vol. III., p. 102.) To the second class belongs Montgomery.

I have already shown that design, or premeditation, is not any more incompatible with epileptic insanity than with any other form of insanity, and I will further assert with Devergie, that: "Intelligence and sagacity are not sufficient to enable one to judge if a brain be healthy or diseased; it is necessary, in addition, to have studied individuals suffering from every

variety and form of insanity." (*Where does reason end or mania begin?* *Psychological Journal*, Vol. 12, p. 358.) Then again, as Boileau de Castelnau establishes so categorically; "Premeditation may bear the mark of criminality, in this sense; it may have been conceived in a moment of calm and of more or less unfettered exercise of the intellectual faculties, but yet, the deed may have been perpetrated under the pressure of a complete loss of moral freedom, because the individual, deficient in resolution at a moment distant from the attack, may yet have found, during the transitory insanity that precedes or follows the fit, a morbid energy sufficient to carry his design into execution. Do we not often see threats repeated without effect, until a fit of drunkenness, of anger, or of transitory madness supervenes, and they come to reality? It becomes, therefore, indispensable to inquire whether, at the moment of the deed, the epileptic was or was not in one of those stages so common with those patients, whether it did not happen a short time before or after the fits, whether the attacks did not recur more frequently than ordinarily." (Op. cit. p. 44.) It can not be needful that we should add, how requisite it was to have carefully considered in their true light, all these circumstances in Montgomery's case, while there is no necessity either to repeat, that the evidence adduced medically as well as legally, was ignored in its most cardinal points by the physicians examined for the prosecution, whose opinions we are, therefore, bound, in justice to the criminal, to question, as immaterial in many respects, and resting on an unwarranted assumption as to facts and scientific principles.

One word about the absence of some objective signs in Montgomery—remarked by Dr. Hammond. Physical signs can scarcely be held sufficient to diagnos-

ticate any form of insanity, and they possess therefore no intrinsic medico-legal value. "Much reliance, as Bucknill truthfully says, is not to be placed upon any one, or even upon several, of the physical signs of nervous disturbance. They have a scientific, but scarcely a diagnostic value. They may serve to direct the inquiries of the physician, or even to confirm his opinion founded upon other data; but, standing by themselves, they are of little importance in the diagnosis of insanity." (*Psychological Medicine*, p. 345.)

The researches of Buchut, Duguet, Hughlins Jackson, C. Allbut, Noyes, and my own, show, that although the ophthalmoscope discloses retinal changes in some cases of epilepsy, they are far from being constant or uniform. I furthermore agree with Dr. Noyes, that we are not yet clear in regard to the significance to be attached to the pulsations of the veins upon the disc, taken as a sign of cerebral anaemia, and made much of in epileptic cases to determine the vascular state of the brain. Nor is it clear that Montgomery possessed a normal sensibility, since, as Dr. Hammond testifies, there was a slight want of sensibility in the left side of the body, ordinarily endowed with more acute sensibility than the right. Giving foremost importance to physical signs, this peculiarity should favor rather than discountenance the assumption of dementia in Montgomery's case, according to the observations made by Dr. Hammond in reference to the lessened state of sensibility in dementia. Possibly the phenomenon may also recognize its origin in the disease of the right internal ear extending to the brain,—but this is a mere conjecture of secondary importance to the question of epileptic insanity at issue.

The foregoing details have been intended to specify clearly and briefly, within the restricted limits of this review, the only criteria that should guide us in estab-

lishing the criminal responsibility of Montgomery. I have strictly confined myself to consider the facts in evidence, without stretching their significance, and their careful examination leads me to conclude, that; in Montgomery's case, the murder was committed, if not directly when laboring under a fit, most certainly in one of the rapid transitions from the reappearance of reason to the violence or fury, peculiar to the condition of epileptic insanity through which Montgomery had gone from the Monday previous to the homicide, until the Sunday when the murder took place. No feeling can arouse greater delusions than jealousy, and no brain can be more susceptible to its evil influence than that of an epileptic. What transpired during the night of Saturday, after Montgomery and his wife arrived home, when all was peace and harmony between them, and she had been talking to him sitting on his knee; when, as Montgomery says, they even had sexual intercourse, is, indeed, a mystery to all. Why, therefore, should Montgomery have preferred the bright morning to the dark silent hours of the night to accomplish his design, if he really had premeditated murdering his wife? And how could she so confidently and unconcernedly go to sleep during his momentary absence, if they had actually quarrelled so angrily in the morning; for, the evidence indicates that she was struck while sound asleep. It is not denied that Montgomery suffered from nocturnal epilepsy, whereas it is not uncommon for fits to occur upon the rising of the patient, and, therefore, it may be fairly assumed that Montgomery might have had an epileptic seizure on getting up, before or after he was cutting the kindlings for the fire. Furthermore we find on behalf of this assumption, that when he was seen running to the barn immediately after the murder, Montgomery was partially dressed,

one of his suspenders hung over his shoulder, and the other down by his side. It has not been disproved that the ax remained in Montgomery's room from the Thursday night, between two and three o'clock, previous to the homicide, at which time he took it from his father's house to cut some kindlings to warm the baby's milk. I do not believe that any stress can be laid upon the five minutes that Montgomery looked at his wife, as he said he did, before he struck the deadly blow on her head. Five minutes is a meaningless, familiar expression, which refers to any indefinite short duration of time, and, on this account, it might have been as well five seconds as five minutes, since Montgomery was by no means in a condition to estimate how long a time it took him to obey the morbid impulse to strike his wife. Montgomery did not go to meet his younger brother in the street, but the latter saw him run to the barn in a bewildered state, with a razor in his hand, and assisted by his father, succeeded in preventing his attempts to cut his throat. The kiss Montgomery gave his wife after slaying her, his subsequent deportment, the remark he made to James Hunter, whom he met on his way to the police station, his answers and requests to the police officers, the conversation with the chaplain of the jail, and afterward with John F. Rothgale and Mr. Benjamin,—all occurring within the two or three hours after the homicide, are typical of the condition of epileptic insanity then exhibited by Montgomery. His intellectual faculties operated by sudden starts, were in a state of instability incited by every idea that suggested itself to a brain in the highest morbid degree of susceptibility, superinduced by the previous several fits, after which he returned to a calmer or more natural condition on coming out of the sleep he had on Sunday afternoon. Thereupon, the recollection of the recent events, and of

the tragedy in which he played such a principal part, entirely disappeared, and the murder continued from that moment wholly unaccounted for and ignored by David Montgomery.

Sleep always marks the transition from the epileptic seizure to the normal state of mind, whether the fit be a genuine paroxysm, or one of cerebral epilepsy. I may assert on personal observation, that in every instance complete recovery of the intellectual faculties is heralded by sleep, even if mania has continued for several days. When mania attends the convulsive fits the patient jumps from the spasmodic stage directly into that of mental excitement, without sopor, or any intermediate period of sleep between the two. I do not recollect any instance where the contrary fact, namely, passing into a sound condition of mind during wakefulness, has taken place in epileptic insanity. It is unnecessary to point out the medico-legal bearing of this phenomenon.

In order to leave no important point unnoticed, let me remark that, the marriage of young Montgomery, a boy, sober, industrious and religiously brought up, to a vile prostitute, indicates anything but soundness of mind; while the strong hereditary tendency to insanity permeating his family, and the existence in him of internal otitis, since his infancy, in addition to the severe injury he received on the head, are also circumstances of great moment to help us to judge the medico-legal question at issue in Montgomery's case. It is plainly manifest by the report of the commissioners that the epileptic malady—*petit mal* and dementia—continued after the homicide.

Finally, two circumstances deserve special notice. In Sept., 1871, while in jail, Montgomery had an epileptic fit in the presence of his brother A. G. Montgomery,

Mr. McKebben and other persons. The fit was a severe one; thereupon Montgomery fell into a restless kind of sleep, became stupid for three days, and remained unconscious of his having had a fit.

The 22d of last August, about 8 o'clock in the morning, I accompanied General J. H. Martindale to visit Montgomery at the jail in Rochester. We found that Montgomery was just getting up. I was left alone with him in the cell, and examined him for about three-quarters of an hour. He did not take particular notice of General Martindale, whom he had not seen for several weeks. His bodily condition was good, but his hands and feet were quite cold and very purple. The marks in the neck were slightly apparent. The face was congested, with a stupid expression; eyes encircled by a deep bluish hue, pearly color of the conjunctiva; pupils very much dilated before the bright light of the sun; and the right pupil, irregular in shape, much larger than the left; lips puffy. Several small petechiae were around the eyes and in the neck. Slight sero-purulent discharge from the right ear. Tongue slightly coated, with an ulceration in the left side. Pulse 104, and soft. Respiration 13 to 14 to the minute. Action of the heart irregular, soft murmur at the base. Complained of pain in the right temporal region, and of severe headache. Did not sleep from headache on the night of Wednesday—two days before our visit, but was not aware of having had any fit. His pillow had a large light, bloody stain. Did not wet his bed; but had frequent seminal emissions in his sleep. The night previous—"had a fight with a cartman who was driving at him;"—and "his child came to see him."—Did not know whether his wife was dead or alive, and wanted to go to her.—Does not remember having killed her. On the night of Saturday before the homicide,

he went to bed on good terms with her; had not slept with her for a week; had sexual intercourse with her after retiring; was disturbed by the baby late at night and could not sleep from headache. Did not go to his father's house for the ax, he had kept it in the room, and went down stairs on Sunday morning to get kindlings for the fire. Does not recollect what occurred afterwards; nor how it happened that he was brought to the jail. His wife was sleeping when he came down; had no quarrel with her that morning, "she was sleeping." He gave all these replies to my questions, but did not open any conversation, was slow in his answers, and would laugh in a silly manner at many of my inquiries. The state of his mind, his stupid appearance, and the general expression of his countenance indicated most positively that he had a recent nocturnal attack, probably on Wednesday night, and I said so to General Martindale. There was no doubt as to his being then demented and actually suffering from epilepsy. I should also believe that, in addition to the fit witnessed by his brother, and to the one the traces of which were so plainly to be seen when I visited him, Montgomery must have had, during his incarceration, other unnoticed nocturnal attacks.*

* Since writing the above a Lunacy Commission has been appointed by Gov. Hoffman, consisting of Prof. John Ordronaux, Dr. J. M. Cleaveland, Supt. Hudson River Hospital for Insane, and Dr. Jacob S. Mosher, Surgeon General, of New York. After a careful examination of Montgomery, the Commission declared him insane, and he has since been sent to the State Asylum for Insane Criminals, at Auburn.

M. G. E.

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BOOK NOTICE.

Wharton & Stillé, Medical Jurisprudence. Vol. 1: "Mental Unsoundness and Psychological Law." Philadelphia: KAY & BROTHER, 17 and 19 South Sixth St: 1873.

We have received from the publishers the first volume of a new edition of Wharton & Stillé's Medical Jurisprudence.

The high position which this work has already attained, both in the legal and medical professions, is a sufficient guarantee of its intrinsic value. This treatise is substantially a new one, and the effort has been made to place before the reader a complete summary of the well established principles of Psychological Law, as also of the progress in this science during the past decade. In pursuance of this object, the same general divisions have been followed, and we find as in the former edition, the chapters on "Mental Unsoundness in its Legal Relation," and "Mental Unsoundness considered Psychologically." They have, however, been entirely recast, and much new matter has been introduced. A new chapter on the "Psychical Indications of Crime" is presented, and a subdivision on the "Treatment of Insane Criminals," now appears as one of the main divisions of the work.

The volume contains 875 pages, a size, however, only commensurate with the importance this subject has attained in the criminal trials of the country.

The theories of "moral insanity," "irresistible impulse," and "mania transitoria," receive no support, and

are fitly recognized only as pleas advanced as an excuse for crime.

We can not in the present number of the JOURNAL review this work at length. We can, however, heartily commend it to our readers as being the best, and latest work upon the subject of which it treats.

The second volume is now in print, and will be out the last of January. It will embrace the topics of Sex, Poisons, Wounds, Identity, Malpractice, &c. When completed, according to the proposed design, it will offer to the profession a most thorough *r  sum  * of Medical Jurisprudence.

REVIEW OF ASYLUM REPORTS FOR 1871-72.

33. NEW HAMPSHIRE. *Annual Report of the New Hampshire Asylum for the Insane*: 1871. Dr. J. P. BANCROFT.

There were at date of last report, 225 patients in the Asylum. Admitted since, 152. Total, 377. Discharged recovered, 55. Improved, 31. Stationary, 16. Died, 21. Total, 123. Remaining under treatment, 254.

In this the thirtieth report of the Institution, the managers present some interesting particulars regarding its early history, its cost, legacies, &c. The whole cost to the State, from the first appropriation in 1838, till the present time, for lands and buildings, is \$194,000. The Institution is self supporting and is now worth to the State, three or four times its original cost. The names of the several donors to the permanent funds of the Institution, with the sums contributed by each are given. These now amount to \$219,670.99, the income from which is used for the current expenses.

Dr. Bancroft gives a summary of the progress made in the treatment of insanity, as exhibited in the architecture and construction of the buildings erected at

different periods in the history of the Asylum, and remarks, that the same gradual enlargement of ideas which has appeared in the construction of successive buildings, would be found in tracing the internal movements in the daily life of the hospital; while this is true as relating to general usages, it applies with especial emphasis in the department of "Moral Treatment." The Doctor closes with some recommendations to the managers regarding improvements to be made in wards devoted to the care of disturbed patients.

34. NEW YORK. *Twenty-Ninth Annual Report of the New York State Lunatic Asylum*: 1871. DR. JOHN P. GRAY.

There were at date of last report, 643 patients in the Asylum. Admitted since, 516. Total, 1,159. Discharged recovered, 168. Improved, 85. Unimproved, 245. Not insane, 17. Died, 61. Total, 576. Remaining, 583.

Besides the usual statistical tables and the record of mortality, Dr. Gray has given the summary of State provision for insane from the opening of the New York State Asylum in 1843, to the present time, and concludes as follows:

We have thus given a brief summary of the action of this State touching the care and provision for the insane for the past twenty years, dating from the first organized effort of the county authorities to rid themselves of the local care of the insane poor and have them all provided for in institutions erected by and under the control of the State.

The history of this subject, as found in legislative documents and in reports of this Institution, shows how earnest and persistent the efforts have been to accomplish what now at length seems to be attained, namely, the construction of institutions in the various parts of the State, which will be accessible to all the insane, and thus insure the practical application of the principles proposed by the superintendents of the county poor in 1855. We have also presented as briefly as possible the settled and fundamental prin-

ciples, embodying the experience of the Association of Medical Superintendents of American Institutions for the past thirty years, by which we have been guided in all our efforts to secure the proper care of the insane of the State, both rich and poor. We earnestly trust that the necessary appropriations will be made for the immediate and speedy completion of the institutions now authorized.

35. NEW YORK. *Thirteenth Annual Report of the State Lunatic Asylum for Insane Criminals, at Auburn, N. Y.: 1872.* Dr. JAMES W. WILKIE.

There were in the Asylum at date of last report, 74 patients. Admitted since, 31. Total, 105. Discharged recovered, 10. Unimproved, 3. Died, 5. Total, 18. Remaining under treatment, 87.

The last Legislature appropriated \$25,000 for enlarging the present Institution. A new building, 145 feet in length, forty feet in width, and capable of accomodating 80 patients, is in process of erection. Much of the labor is performed by the convicts of the prison and the inmates of the asylum. The need of this addition has been felt for years, and we congratulate the Doctor on the prospect of having sufficient room to care for those committed to his charge in a manner conducive to the health, comfort and safety of all.

Complaint is justly made that so many insane are sentenced to the State prisons. During the year just closed, eight of the twenty-seven patients received from the prisons were of unsound mind when committed to the prisons. In some instances this is thought to be the result of the careless manner in which our criminal courts are conducted, as often no inquiry into the mental condition or moral responsibility of those indicted for crimes, is made. Another reason is also given weight; the fact that in transferring a criminal to the prison, the expense of his care and maintenance is also transferred from the county to the State. Legislation is

recommended which may remove any incentive to such unjust and inhuman treatment of the unfortunate insane.

The cases of two prisoners now in the asylum is given somewhat in detail. One is that of a blind boy, convicted of the murder of his father and mother, and the other a deaf mulatto mute, of illegitimate birth, who in an angry state killed his employer. They were committed to the asylum under a special act of the Legislature :

Here are two youths perfectly sane, but of defective senses, the one blind and the other deaf and dumb, capable of instruction and of full moral responsibility, left to such absolute neglect, ignorance and moral darkness as to forbid a jury to convict them of crime. They were, indeed, born and reared in the lowest strata of social life, yet are they children of the State, entitled to its wise paternal care. Ought the State to allow such neglect, such unnecessary ignorance, such dangerous absence of moral sense and moral accountability? The attention of the Legislature should be solicited to the consideration of this important question. Should not the suitable education of the blind, the dumb and the feeble minded, be made compulsory by the State? Is it safe to allow them in the most dismal home, or in the Alms-house, to grow up without training enough, when it is possible, to render them accountable and amenable to law? Here were three shocking instances of homicide. The newspapers were filled with the sickening details, the public mind was widely excited and horrified. The deepest crimes known had been committed; yet on careful judicial investigation it was found that the perpetrators were not hardened criminals, but poor, neglected, pitiable unfortunates, blind and dumb, never raised by adequate training to the level of moral responsibility. The State justly, honorably cares for such unfortunate classes; it builds Asylums for them; should it not also seek out the most neglected, provide for their education and compel their attendance? How much *cheaper* would it have been for the State of New York to have trained these boys whom Providence had deprived of a part of their senses, and consigned to the most wretched surroundings, and thus have prevented their crimes, than to have borne the heavy expense of trial before juries, and subsequent support in the Asylum! Is an Insane Asylum precisely the place for those perfectly sane, but unfortunately deaf and dumb or blind? Are not

other lives exposed while such persons are left to similar neglect? Is it not one of the demands of our advancing Christian civilization to extend its beneficence, to search out more accurately the demands for its charities, and more minutely the provisions necessary to the safety and well-being of its citizens?

The statistics of the report are full, and of interest.

36. NEW YORK. *Annual Report of the Kings County Lunatic Asylum*: 1872. DR. EDWARD R. CHAPIN.

There were at the date of the last report, 643 patients in the Asylum. Admitted since, 367. Total, 1,009. Discharged recovered, 125. Improved, 70. Unimproved, 56. Died, 74. Total, 325. Remaining under treatment, 684.

During the year just closed, there have been fourteen cases of small-pox in the Institution, of whom four died. In regard to vaccination, Dr. Chapin recommends the use of the bovine in preference to the humanized virus. The Doctor has recently returned from Europe, and in his report discusses the subject of restraint. His experience abroad strengthens his belief in the superiority of some form of mechanical restraint over the use of the hands of attendants, and relates some incidents which came under his personal observation. In conclusion he returns thanks for the able manner in which Dr. MacDonald conducted the affairs of the Institution in his absence.

37. MASSACHUSETTS. *Report of the Boston Lunatic Hospital*: 1871. DR. CLEMENT A. WALKER.

These were in the Hospital, at date of last report, 233 patients. Admitted since, 64. Total, 297. Discharged recovered, 26. Improved, 9. Unimproved 3. Died 26. Total 64. Remaining under treatment, 233.

The Doctor rejoices in the relief from continued over-crowding, to which the asylum has been so long sub-

jected. This has been effected by the action of the city council, in requiring the committing magistrate to send all applicants for hospital care to one of the State asylums: since then but four have been received.

The proposition for the erection of a new hospital, failed of success by a tie vote of the Board of Aldermen of the city of Boston. The matter will not be allowed to rest here, and in the report Dr. Walker makes an urgent appeal to the people to discharge their duty toward the insane poor of their own city.

38. *PENNSYLVANIA. Annual Report of the Insane Department of the Philadelphia Alms House: 1871.* D. D. RICHARDSON, M. D.

There were in the Hospital at the date of the last report, 755 patients. Admitted since, 342. Total under treatment, 1,097. Discharged recovered, 64. Improved, 82. Unimproved, 39. Not insane, 2. Died, 79. Total, 266. Remaining under treatment, 831.

39. *Annual Report of the State Lunatic Hospital of Pennsylvania: 1872.* DR. JOHN CURWEN.

There were at the beginning of the year 451 patients. Admitted since, 212. Total, 663. Discharged recovered, 51. Improved, 43. Unimproved, 56. Died, 46. Total, 196. Remaining under treatment, 467.

The Institution has been much crowded during the past year, especially in the wards devoted to the treatment of acute and excited patients. The great number of this class admitted, has rendered necessary the placing many of them among the more quiet, and this has been done to the detriment of both classes, and has crippled the power of the Institution to accomplish the greatest good which would otherwise have resulted. The action of the Association at its last meeting is ad-

verted to, and the resolutions given in the October number of the *JOURNAL OF INSANITY*, are reproduced. The effects of this overcrowding of the wards upon the attendants are briefly spoken of, as also the difficulties which stand in the way of procuring such help as is desired to fill such positions, and the qualifications which render them most efficient. The new arrangements for heating and ventilation referred to in previous reports have been perfected, and give satisfaction. The wards are kept warmer and more comfortable, and the impure air is now readily removed by the action of the fans. So striking was the effect, that their temporary stoppage from any cause, was immediately noticed on the wards.

40. *ALABAMA. Twelfth Annual Report of the Alabama Insane Hospital: 1872.* PETER BRYCE, M. D.

There were at the date of last report 288 patients under treatment. Admitted since, 146. Total 434. Discharged recovered, 47. Improved, 9. Unimproved, 7. Died, 33. Total, 96. Remaining under treatment, 338.

The report of Dr. Bryce is one of more than usual length and interest. He presents several tables showing the ratio of the apparent increase of insanity in the United States and foreign countries for the past few decades.

The great increase in the number of admissions and applications he attributes, not so much to a real increase in the disease itself as to "the enlightened and philanthropic public opinion, dating with the establishment of an institution devoted exclusively to the treatment of mental diseases, and conducted upon liberal, humane and scientific principles."

He gives a condensed account of the symptoms characteristic of general paresis, which, he says, appears to be more common in the South than formerly.

An extension to the Institution is imperatively demanded by the pressing applications for admission. In urging this claim upon the attention of the Legislature, he quotes at length the reports of the Association "On the Construction of Hospitals for the Insane," and the "Propositions in reference to the Organization of Hospitals for the Insane."

The remarks upon the subject of insanity—its causation—the medical and moral treatment—and the advantages offered by institutions, are judicious, and fully in accord with the views now held by the most enlightened and scientific alienists.

I am frequently asked if insanity is curable by physic—if the patients here are subjected to strictly therapeutical treatment, and in what manner such treatment is likely to confer benefit on a mind diseased. Without entering upon a discussion of the nature and relations of the mind, of its existence separate and distinct from the brain, and of the solecism implied in the affirmation that it is subject to disease, we reply, that abnormal mental manifestation, constituting what we call insanity, is the result, in every case, of a diseased condition of the brain, just as dyspnœa or shortness of breath results from a deposition of tuberculous matter in the lungs. There is no exception to this rule. In the one case the mind is manifested irregularly or abnormally, because its organ, the brain, is diseased, just as the respiration is embarrassed in the other because of the tuberculous deposit. Now it is just as philosophical, and as important, to correct with therapeutical measures the departure from health in the one case as in the other, and both are amenable, under favorable circumstances, to the remedial action of drugs.

The great difference in the treatment of insanity, over other bodily diseases, lies in the very important part which the mind itself plays, in aiding to bring about a restoration of diseased cerebral structure. This agency, on the part of the mind, we designate *moral treatment*. It corresponds exactly, in its operation, to the influence of mind upon disease in other physical disorders, and which we all recognize as most potent and often necessary in effecting a restoration to health. Moral treatment, or as it might more properly be designated, *mental treatment*, is intended, therefore, to

operate through the mind itself upon the diseased brain; and the paramount importance which must be assigned it as a remedial agent, and its peculiar modes of action, constitute the only real difference in the treatment of insanity, and the numerous other bodily diseases to which our flesh is heir. This explanation or statement, I confess, would be more lucid and satisfactory, perhaps, if the *separate existence and self-acting nature of the mind*, and the relation it bears to the brain, were better understood; but the demonstration would be out of place in a report of this character. The fact, however, if admitted, will explain why a well arranged hospital, conducted on scientific principles, offers the greatest advantages, not only for ordinary medical treatment, but for the direction and healthy development of the mental power, which we stated to be of equal, and often of greater importance than drugs in the relief of morbid states of the system.

The first indication of returning reason, and the beginning of recovery, in these cases, is a *consciousness*, more or less vague at first, on the part of the patient, as to the true nature of his disease—a moral means, by the way, of the first and greatest importance—and nowhere can this *consciousness* be sooner roused and brought in operation than in a hospital in which the insane are collected and treated with special reference to their peculiar malady. The first object of the physician, conjointly with the use of the usual therapeutic means addressed to bodily conditions, is to unfetter the mind, as it were, of its delusions, and place it in a condition to realize its true relations to its external surroundings. In this manner, the agency of the mind itself is early brought to the aid of drugs, in repairing diseased structure, and with proper persistence good results may, sooner or later, be confidently expected. How different the course too often pursued at home, in the family circle, where, either from apprehension of evil results, or a misplaced sympathy, or more probably from ignorance of the principles upon which moral treatment is shown to proceed, the friends give too ready assent to the vagaries, whims and senseless exactions of the unfortunate patient. It has often been a question to me, how long any of us, upon a slight departure from our customary course of thought or conduct, might survive such treatment before subsiding into hopeless fatuity.

Besides the direct efforts on the part of physicians of hospitals for the insane, there are other influences in force in these establishments which tend to bring about healthy action of the mind, and consequently, aid in the restoration of the diseased brain to its

normal and healthy condition. The interruption to old modes of thought and feeling by new scenes and associations, change of food, regular habits of living, hygienic and sanitary precautions not usually required at home, and subordination to firm, exact, but gentle and consistent discipline, all together, combine to bring into full effect the so-called, moral treatment, in the hospitals organized expressly for the treatment of insanity.

The entire building has been put in repair during the year ; accommodations have been made for 50 patients. Besides other alterations and additions, a new amusement room has been prepared, and great improvements effected in the arrangements for heating the building in the machine shops, bakery, &c. Much more attention has been given to amusing and entertaining the patients. The grounds in front have been planted with trees and shrubbery; and airing courts for the different classes of patients have been added.

The report before us bears the imprint, " *Meteor* " print—Alabama Insane Hospital : Tuskaloosa.

41. OREGON. *Fifth Biennial Report of the Insane Asylum of Oregon : 1871.* Dr J. C. HAWTHORNE.

There were in the Asylum at date of last report 122 patients. Admitted since, 138. Total, 260. Discharged recovered, 61. Improved, 14. Died, 18. Total, 93. Remaining under treatment, 167.

The ratio of recoveries to the number of admissions is about forty-three per cent., which is a favorable exhibit. Additions have been made to the building which have increased the accommodations. An assembly room has been completed, which is to serve as a chapel, concert and lecture room. The want of provision on the part of the State for the transportation of patients to their homes, after their discharge from the Asylum, indicates a radical defect in the law governing the institution, and one which calls for immediate rem-

edy. It is manifestly unjust to the patient and to the doctor, who says that to many of them he has given from his own means the full amount to take them home, while in other cases railroad and stage companies have made a reduction of fares, leaving him to pay the balance. For others he has found some employment till they could earn sufficient to pay for their transportation. It would be an act of economy and charity for the State to make reasonable provision for such cases.

42. NORTH CAROLINA. *Report of the Insane Asylum of North Carolina:* 1872. Dr. EUGENE GRISSOM.

There were in the Asylum at date of last report 245 patients. Admitted since, 43. Total, 288. Discharged recovered, 14. Improved, 9. Unimproved, 14. Died, 18. Total, 55. Remaining under treatment, 233.

This report of Dr. Grissom is a strong plea for additional accommodations for the insane of the State. There are at least 500 insane still unprovided for, and of this number at least fifty per cent. are in need of hospital treatment for curative or custodial purposes.

The arguments which have been so often given in the pages of the JOURNAL as well as in various reports are again adduced, viz., the curability of insanity in the early stages of the disease; the small cost to the State in cases of recovery; the great cost of the incurable insane. The cost of the support of the insane, when compared with other dependent classes, especially the sane paupers, is made the subject of comment. The appropriation made by the Legislature for the past year was not equal to the required expenditure, but by the action of the Trustees, "the policy of making the Asylum a curative hospital as contra-distinguished from a mere custodial institution" was adhered to, and confidence expressed that the Legislature would make up any defi-

ciency that might arise. Such a resolution on the part of the Board indicates a determination to sustain the doctor in his efforts to advance the highest interest of those intrusted to his care, and gives evidence of the enlightened views upon the subject which control them in their official relations.

43. INDIANA. *Twenty-fourth Annual Report of the Indiana Hospital for the Insane*: 1872. Dr. ORPHEUS EVERTS.

There were at date of last report 477 patients in the Asylum. Admitted during the year, 312. Total, 788. Discharged recovered, 148. Improved, 31. Unimproved, 82. Not insane, 3. Died, 57. Total, 221. Remaining under treatment, 467.

The Institution has been visited by an epidemic of small pox introduced by the admission to the Hospital of a woman who had already passed the acute stage of the disease, and whose husband was the same day transferred to the pest house by the authorities. The disease still continues and several deaths have already occurred.

Our constant endeavor in general treatment of the Insane committed to the care of the Hospital, has been to improve the physical condition of each patient, by medication when sufficiently defined pathological conditions or functional derangement, ordinarily amenable to medicinal agents were apparent, but more frequently by better food, better clothes, better habits of daily life, and more comfortable surroundings compatible with specific necessities, and the greatest degree of personal liberty admissible under the circumstances of each case.

Many improvements have been made during the year. An old basement ward on the women's side, which was dark, damp and cheerless, has been transformed into a light, dry, and cheerful ward. Other basement rooms have been remodeled and rendered tenable for employees, and added to the convenience of administration.

Many repairs of the ordinary wear of the Institution have been made, and others are "indispensably required." Several changes as enlarging wards, raising roofs to form new wards in the attics, are "urgently recommended." They would increase the capacity of the Institution by 100 beds. Estimates of the cost are also presented.

This is the only asylum for the insane in the large and wealthy State of Indiana. It accommodates about five hundred patients, while the whole population is about two millions. In the ratio of one insane person to one thousand of population, and this is not a large percentage, there are at least two thousand insane in the State: fifteen hundred are thus unprovided for. The question of the duty of the State to this unfortunate class is discussed in the report, and the reasons why the State should make hospital provision for all, are given. The cost of providing for one thousand patients, the number probably dependent upon the public, is given at "one million" of dollars. Upon the separate provision for classes, the following remarks are made:

SEPARATE PROVISION FOR CLASSES.

The question of providing for the chronic or "incurably" insane, in separate institutions, has passed beyond discussion among medical superintendents of Insane Hospitals, having been repeatedly and exhaustively debated, and almost unanimously negatived.

There should be no such word as "incurable" recognized as a qualifying or distinguishing title for any institution provided for the care of insane citizens. Even the term so common with all, "Asylums," should be banished, and the name indicative of care and cure, as well as custody or refuge, "Hospital," should apply to all such public foundations; and the classification of inmates should be under each roof, and not under separate provisions.

Because: Some persons do recover after years of aberration and apparent dementia.

Because: So long as there is any considerable remnant of intelligence remaining, hope does not desert even these unfortunates, and it should not be crushed out by a useless word.

Because: There is no economy in making separate provision for classes, based upon character of disease or probability of cure.

Because: It requires no more room to provide for all in mixed classes, than for the same number separately.

Because: The class supposed to be "curable," because of short duration of the disease, derive much benefit from the presence in Hospital wards of persons who have passed the acute stage, and may have been indeed for years inmates of the Hospital.

Because: All domestic labor derived from insane persons, essential to the economical administration of a Hospital, is performed by that class commonly called "incurable."

Because: In this country, where the sentiment of personal or individual liberty is the predominant characteristic of our citizenship—where no large, habitually dependent, or pauper class, is known—no methods of provision for custody or maintenance for one class of insane citizens, can be devised, which would be less expensive than that required for any other class.

The Doctor advocates the separation of sexes in distinct hospital buildings, though located near each other. He closes his report with remarks of a personal character, having reference to the duties and responsibilities of his office. The administration of Dr. Everts has been so far a highly successful one, and has done credit to himself and the State. We think that any change at the present time, while the Institution is in successful progress, could only be regretted.

43. VIRGINIA. *Report of the Western Virginia Lunatic Asylum.*

Dr. FRANCIS T. STRIBLING. 1871 and 1872.

There were in the Asylum at date of last report, 342 patients. Admitted since, 48. Total, 390. Discharged recovered, 32. Improved, 2. Unimproved, 2. Died, 14. Total, 50. Remaining under treatment, 340.

The Institution is now crowded with chronic cases, and many urgent appeals for the reception of acute cases are by necessity refused. No law exists providing for the removal of any class of patients except by recovery, and no additional room is authorized, though the subject has

often been brought to the notice of the Legislature. An attempt was made during the year to appropriate a portion of the asylum grounds for the use of a railroad now in construction. It was successfully resisted on trial before the county court, by the managers of the Institution.

45. SOUTH CAROLINA. *Report of the Lunatic Asylum of the State of South Carolina.* Dr. J. F. ENSOR. 1872.

There were at date of last report, 295 patients in the Asylum. Admitted since, 93. Total, 388. Discharged recovered, 41. Improved, 7. Unimproved, 14. Imbeciles, 18. Died, 24. Total, 104. Remaining, 284.

To show the difficulties under which the Doctor has labored during the year, we make the following extract from his report :

The past year has been one of extreme anxiety and apprehension, not only to the friends and relatives of our inmates, but to those charged with the government, responsibility and management of the Institution. Many have been the days that we have not had supplies of food for the morrow, and when there seemed no possible chance of obtaining them. Starvation and nakedness stared us in the face, and but for the generous and humane indulgence of some of our Columbia merchants, our patients must have perished or been turned out upon the public, and the doors of the Asylum, which, for the last fifty years, has been a refuge and a blessed retreat for the afflicted of the State, been closed—a gloomy and painful example of official extravagance and official corruption. "It is no figure of speech to say that from the beginning of the year to its close, the existence of the Institution has been one severe protracted struggle." All this anxiety; all these painful apprehensions and these trying and terrible embarrassments, were caused by the State Treasurer failing, as he still fails, to pay the appropriations made last winter by a generous Legislature for the support of the Asylum. The institution had no assistance from the State from July, 1871, to the 13th day of January of this year. I was compelled to borrow \$5,000 for refurnishing the Institution, and \$4,000 for heating it. This I was enabled to do at the banking

house of E. J. Scott, Son & Co., through the assistance of Mr. C. H. Baldwin. Most of the money paid by the Treasurer last winter was in liquidation of bills due from twelve to eighteen months. Immediately after the appropriation for the support of the Asylum for this year was made, I presented the claims of the Institution to the State Treasurer, and was informed that there was no money in the Treasury. They were presented again and again, and the sore needs of the Institution and its threatening distress explained in the most pathetic language at my command, but without avail.

The urgent appeals which were made to State officials, merchants, and others, in behalf of the Institution, are given in detail.

The possibility of keeping the Institution open any longer appeared to be at an end. Every avenue from which relief could come seemed closed. But Mr. Hope, (I think there must be something in a name,) fully understanding and appreciating our situation, kindly came to the rescue a second time by offering to furnish us another month's supplies, which brings us to the end of our fiscal year, and to the date of this report.

I present these details to show what a hard struggle the Institution has had for existence during the past year, as well as to demonstrate the utter impossibility of keeping it open another year, or even another month, unless prompt measures are taken to relieve us of our present disgraceful financial embarrassment. Though the last Legislature made an appropriation amply sufficient to meet all our liabilities under ordinary circumstances, it was not enough, under the extraordinary circumstances through which we have passed during the year. A large portion of the appropriation was eaten up by bills of interest, and by the payment of excessive and ruinous prices. The merchants could not be expected to sell goods at cash prices on indefinite time, and many of our debts are from one to two years' standing. I am satisfied that, if we could adopt the cash system, with an economical expenditure of the money, the Institution could be supported for fifteen or twenty thousand dollars less per annum than under the present system of indefinite credits. It will be seen by reference to Exhibit No. 12, that our appropriation for the year now just closed will fall short of meeting our liabilities by \$7,186.41. I therefore beg the General Assembly, as soon as that body convenes, to make a supplemental or special appropriation to cover this defi-

ciency, to the end that those who have so long and so patiently waited for their pay, may not be disappointed, and that the credit of the Institution may be restored.

The amount now due the officers and employees of the Asylum is \$15,512; of which more than \$2,000 is due the Superintendent. Too much credit can not be awarded to Dr. Ensor, for his self-sacrificing labors in behalf of the patients under his care. The Managers express their gratitude for such humane efforts, though they were powerless to render adequate pecuniary assistance. They say in their report,

We can not find language adequate to express our appreciation of the excellence of Dr. Ensor's official administration and the magnitude of the personal sacrifices he has made to preserve the integrity of the Asylum. It is doing but feeble justice to say that, in our opinion, he has been the savior of the Institution.

We have noticed, with great interest, from year to year the difficulties against which Dr. Ensor had struggled since he assumed the charge of the Asylum, and sincerely hope that the Legislature of the State will, even at this late day, do justice to this department of charity to which it has in the most distinct terms pledged its support.

FOREIGN REPORTS.

NEW SOUTH WALES. *Report of the Hospital for the Insane, Gladesville: 1869-1870, 1871.* F. NORTON MANNING, M. D.

Dr. Manning is well known to the specialty for his able and exhaustive report upon insane asylums, made while acting as the Government Commissioner. His reports are interesting, and his opinions upon any subject connected with hospitals and treatment of the insane are entitled to great weight and consideration. We give his testimony regarding the value of earth closets in asylums:

The establishment of earth-closets instead of the filthy privies which before existed has been the greatest possible improvement; but I can not report them as altogether a success, since at times, owing to their constant use, to the difficulty of obtaining a full supply of sufficiently dry earth, and to the fact that the earth is applied by hand instead of by a mechanical arrangement, they are somewhat offensive. Earth-closets with mechanical arrangements for applying the earth had, before the recent alterations, been tried in one of the closets used by the patients, and in those used by the officers of the Institution, and had signally failed. In fitting the new closets in the wards, as no new mechanical appliance could be procured without considerable trouble and delay, it was deemed advisable to apply the earth by hand at the back of the closets, wherever such an arrangement was practicable, and from the front where the arrangement of the buildings did not allow of any other approach. Experience has proved what I fully anticipated—that such an arrangement is only a partial success,—that with a paid servant to apply the earth, and every possible care to ensure frequent application, the closets are often by no means free from smell, because every excretion is not immediately covered. The deodorizing power of dry earth, which has been the subject of such extravagant laudation, is well known to all who have had practical experience on the subject to have been grossly exaggerated if it is not absolutely non-existent. Its mechanical action in preventing offensive exhalations has been well known since the days of Moses, whose direction to the Israelites for every man to go abroad without the camp to dig with a paddle and turn back and cover that which came from him is, after some centuries of neglect, with curiously little modification, one of the most approved sanitary regulations of our day. To ensure the full action of dry earth in preventing offensive exhalation, it is absolutely necessary that every excretion should be immediately covered, and this is only possible either by each individual applying it by means of a scoop, on rising from the seat, or by the use of some mechanical contrivance. In all large public institutions (with the single exception of those for the insane,) in schools, barracks, and in private houses, the use of mechanical contrivances may be dispensed with; they are unnecessary to any one in possession of his intellect and a scoop; but with all, except a very small number of the insane, some simple yet strong piece of mechanism working with the seat and throwing a shower of earth after every use of the closet, is absolutely essential. No regulation, no drill, no watchfulness, will serve in an

institution for the insane without some mechanical means; and without this, almost absolute freedom from smell—the success which attends the dry-earth system only under the best arrangements and the most favorable conditions—can not be attained.*

Seventy-Sixth Report of the Friends' Retreat near York: 1872.
JOHN KITCHING, M. D.

Thirty-Second Annual Report of the Crichton Royal Institution and Southern Counties Asylum: 1871. JAMES GILCHRIST, M. D.

PROCEEDINGS OF SOCIETIES, AND PAMPHLETS RECEIVED.

Annual Convention of the Connecticut Medical Society: 1872.

Dr. H. M. Knight, Superintendent of the Connecticut School for Imbeciles, contributes an article upon the hallucinations of childhood. Dr. Henry Bronson presents an exhaustive paper "On the History of Intermittent Fever in the New Haven Region." In it he attempts to distinguish "known from unknown causes," and throws much light upon the causative influences of malaria. Dr. William L. Bradley, of New Haven, has condensed the most advanced views of the treatment pursued in cases of puerperal convulsions, into a short article upon the subject.

Transactions of the Twenty-second Anniversary Meeting of the Illinois State Medical Society: 1872.

Transactions of the Minnesota State Medical Society: 1872.

These volumes are mostly occupied with reports of special committees in various departments of medical science. Many of them are of general interest and pre-

* A Committee appointed by the War Office have recently decided against the adoption of earth-closets for the Army, on account of the difficulties attending their arrangement and their only partial success. See Army Medical Report, 1868.

sent to the profession in a concise and readable form the most recent and advanced views and discoveries in the different branches of which they treat.

On Hereditary Transmission of Structural Peculiarities, by JOHN W. OGLE, M. D., F. R. C. P. [Reprinted from the *British and Foreign Medical Review*: April, 1872.]

Dr. Ogle presents in this paper a most extraordinary case of hereditary deficiency of the distal elements of the fingers and toes. He also gives several cases quoted from other authors in which the same or similar defects have existed. He says: "In considering the probability of mutilations and injuries having been the original cause of many transmitted or hereditary defects, it may be allowable to entertain the question, whether they could have had their rise in malformations consequent upon fright of the mother during pregnancy. How far mental emotion of a mother can affect the "fœtus in utero," is of course a very old and very much debated question. But we have some good authority for supposing that such influence may exist and be operative."

Dr. Ogle does not commit himself further to the theory suggested. We think, however, that the exhaustive article by Dr. S. J. Fisher,* of Sing Sing, N. Y.—"Does Maternal Mental Influence have any Constructive or Destructive Power in the Production of Malformations or Monstrosities at any Stage of Embryonic Development," places this subject in its proper light and shows it as not worthy of scientific or professional support.

New Treatment of Venereal Diseases and Ulcerative Affections, by Iodoform, translated from the French of Dr. A. A. IZARD, by Dr. HOWARD F. DAMON. Boston, James Campbell: 1872.

Iodoform was first discovered in 1822 and introduced in practice in 1837. It soon gained a reputation in the

* AMERICAN JOURNAL OF INSANITY, January, 1870.

treatment of scrofula, syphilis, and other constitutional disorders. Since that time it has not attracted the attention it deserves, and has been but little used by the profession. In this country Dr. Kennedy has written upon the value of Iodoform in the treatment of neuralgia, as an alterative and anodyne. The pamphlet details the experience of the author, Dr. Izard, while an *interne* in *L'Hopital du Midi*, under Ricord. He gives a record of its use in cases of infecting chancre, in some of the secondary and tertiary symptoms of syphilis, in the treatment of soft chancre and consecutive bubo. The pamphlet closes with formulas which should govern the use of the remedy.

On the Physiology of Syphilitic Infection, by FESSENDEN M. OTIS, M. D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons, New York, &c., &c. [In two parts, reprinted from the *Medical Gazette* and *New York Medical Journal*.]

The author presents "the views and theories of leading syphiliographers in regard to the nature and origin of syphilis and the manner in which the system is infected by it," and states his conclusion in the belief "*that it is the germinal element of the blood and tissues alone that is primarily affected in syphilitic disease*, and that it is through the *lymphatic system alone* that the syphilitic influence is propagated to parts remote from the point of inoculation." He also names the most recent microscopic discoveries in the pathology of the disease; states that the corpuscles discovered by Losstrofer have been found to exist in the blood of persons not syphilitic, but cachectic from other causes. The significance of this corpuscle has not been ascertained.

Medical Responsibility and Malpractice. [An Address delivered before the Medical Society of the State of New York, by WILLIAM C. WEY, M. D., President of the Society. 1872.]

This is one of the most interesting and valuable of the many able addresses delivered before the Society. It treats of its subject from the stand-point of a physician and a lawyer. In the former regard the duties and responsibilities of the physician to his patient are well and conscientiously stated, while in the latter the legal rights and the rulings of courts are concisely given.

Puncture of the Bladder by Dieulafoy's Aspirator: by JAMES L. LITTLE, M. D., Surgeon to St. Luke's Hospital, &c., &c. [Reprinted from the *New York Medical Journal*, Nov. 1872.]

This paper describes very minutely a new instrument for the removal of liquids from the cavities of the body. Its special use in Paris and in England has been to remove the urine from the bladder, in cases where the catheter can not be introduced from stricture, or from enlarged prostate. The Doctor has added much to the interest of the description, by giving several cases occurring in his practice.

Message of Governor Conrad Baker, of Indiana.

We are indebted to Dr. Orpheus Everts, for a copy of the Governor's message, from which we extract the portion, entitled,

ADDITIONAL PROVISION FOR THE INSANE.

The Indiana Hospital for the Insane has a capacity for about 490 patients, although by crowding it 520 patients have been in the Institution at the same time. Experience proves that it ought not to be thus crowded. By making the additions and improvements suggested by the Superintendent in his report, the capacity of the Institution can be so enlarged as to accommodate 600 patients, that being an addition to the present capacity of the buildings, of rooms sufficient for 110 patients. The estimated cost of

these additions and improvements is \$50,000, a much less sum than would provide for the same number of patients in the erection of a new Institution. For this reason, and because of the pressing necessity for increased accommodations for the insane, I urgently recommend that an appropriation of the sum named above be made at the present session, and with as little delay as practicable, so that the capacity of the hospital may be increased at the earliest possible day. By doing this, however, the State will not have performed her duty to the insane within her borders. When the capacity of the present Hospital shall have been increased so as to accommodate 600 patients, there will undoubtedly be 1,000 insane persons within the State who ought to have the care and treatment afforded by such an Institution, still unprovided for. To properly provide for these, the State needs two other Hospitals, each having a capacity for the accommodation of at least 500 patients. The State should be divided into three Hospital districts, viz.: a central, a northern and a southern. One new Hospital should be established as near the centre of the northern, and another as near the centre of the southern district as may be found practicable. The State of Ohio already has five such Institutions. To erect, furnish and equip two additional Hospitals for the Insane, each having a capacity for 500 patients, will cost about \$1,000,000; but our people can better afford to furnish this amount within the next three years than they can allow the State to fall behind her sister States in providing for this unfortunate class of her citizens. The idea that those who are supposed to be incurably insane should be provided for in separate institutions has been exploded by experience, and I trust will find no favor in the action which you may take on the subject. At least one new Hospital should be erected as soon as possible, and provision for all the insane who need care and treatment should be secured at no distant day.

The views herein expressed are correct, and should receive the careful consideration and prompt action of the Legislature.

Impairment of Language the Result of Cerebral Disease. By W. A. F. BROWNE, M. D., F. R. S. E., &c. Late Commissioner in Lunacy for Scotland. [Reprinted from the West Riding Lunatic Asylum Medical Reports, Vol. II.]

Dr. Browne gives a summary of the theories of various observers of the change of cerebral structure which

exists in cases of aphasia. He presents cases of the different forms of aphasia, from the total loss of the power of speech to that of a single letter of the alphabet. The object sought to be attained is stated

To have been to present a broader view of the subject of aphasia, and to show that a very large number of different deviations from the normal use of language must be taken into consideration besides its abolition, before we are in a position to generalize confidently upon the subject. It must be confessed that the physiological and pathological evidence as to the localization of an organ for such a faculty is as yet incomplete or contradictory, although it may be admitted that the weight both of scientific research, and scientific opinion preponderate in favor of the conclusion that some part of the anterior lobes, and perhaps some part of the orbital region, are connected with the formation and expression of articulate signs of thought. It may be stated as universally believed that integrity of the cerebrum, or of some part of it, is necessary for the healthy expression of language, or, as it may be otherwise stated, that a material and distinct organ is required for this special power. It must have been observed in the first place that almost all morbid manifestations of this power were observed in persons laboring under cerebral disease, temporary or permanent, proved by dissection or inferred from the presence of mental disease. It must have been observed in the second place that this connection is nearly as clearly established in the most trivial and evanescent, as in the most grave forms of aphasia. It must be observed, in the third place, that where there is no evidence of cerebral alteration, there are detailed proofs of local injury, general or remote disease, which, however amenable to treatment, must have influenced all parts of the nervous tissues ; and, fourthly, that when aphasia precedes hemiplegia, as it sometimes does, for many years, it appears legitimate to conclude that the lesion of the frontal lobes and of the left hemisphere, or of the left third frontal convolution, is somewhat different in nature from that which produces the paralysis, and, in fact, much less severe and formidable ; and, lastly, that although Gall, Broca, and all other observers, insist upon the destruction of a particular part of the cerebrum as involving and necessitating the extinction of the power of language, they do contend that congestion, anæmia, molecular changes, distant irritation, and even the stimulation of mental action, as well as that of alcohol and narcotics, must act upon and

influence the functions of the same part of the cerebrum, and impose limitation, exaltation, incoherence, in accordance with their ordinary mode of operation.

We have received the third number of the *Meteor*, a paper edited and printed by the patients in the Alabama Insane Asylum. The first periodical of the kind published in this country, was conducted by the patients of the Vermont State Asylum. This was soon followed by the *Opal*, edited and printed by the patients of the New York State Asylum at Utica, which was continued nine years. We welcome this new effort and wish for it a long continued and useful existence.

The Physiology of the Brain, Read before the Oneida County Medical Society: July, 1872. By C. B. COVENTRY, M. D., of Utica.

Annual Address, Delivered before the Medical Association of Central New York: by B. L. HOVEY, M. D., of Rochester, President of the Association. "Asiatic Cholera."

Resection of Maxillary Bones without External Incision: by D. H. GOODWILLIE, M. D., D. D. S., of New York, with illustrations and a description of instruments. [Reprinted from the *New York Medical Journal*, July, 1872.]

Facts of Vital Statistics in the United States, with Tables and Diagrams. [Extracts from an address by J. M. TONER, M. D., of Washington, D. C.]

Sixty-First Annual Catalogue of the Officers and Students of Hamilton College: 1872-1873.

Annual Announcement and Circular of Long Island College Hospital. Session, 1873.

Columbia College School of Mines: 1871-1872.

Fourth Annual Report of the St. Elizabeth's Hospital and Home. Utica, N. Y., 1872.

Ninth Annual Report of the New York Catholic Protectory: 1872.

Circular of Information of the Bureau of Education for March, 1872. Containing "An Inquiry concerning the Vital Statistics of College Graduates;" "Distribution of College Students in 1870-1871;" "Facts of Vital Statistics in the United States, with Tables and Diagrams." Washington, 1872.

Twenty-Sixth Annual Report of the Indiana Institute for the Education of the Blind, for 1872.

"*Relation of Education to Insanity:*" by EDWARD JARVIS, M. D. [Reprinted from the Report of the United States Commissioners of Education for 1871.]

Report on the Progress of Otology. CLARENCE J. BLAKE, M. D. [Read before the American Otological Society, July 1872.]

An Examination of Prof. Reese's "Review of the Trial of Mrs. Wharton, for the murder of Gen. Ketchum." By PHILIP C. WILLIAMS, M. D.

Free Parks and Camping Grounds, or Sanatariums for the Sick and debilitated Children of large Cities, during the Summer Months: by J. M. TONER, M. D., Washington, D. C.; and *Infant Mortality* by H. C. HAND, M. D., St. Paul, Minn. [Reprinted from the *Northwestern Medical and Surgical Journal*.]

Report of the Structure of the White Blood Corpuscle: by JAMES G. RICHARDSON, M. D., Lecturer on Pathological Anatomy and Microscopist to the Pennsylvania Hospital. [From the transactions of the American Medical Association.]

A Year of Experiment in Electro-Therapeutics, Including the First Annual Report of the Electro-Therapeutical department of Demilt Dispensary: by GEORGE M. BEARD, M. D., and A. D. ROCKWELL, M. D. [From the *American Practitioner* for August, 1872.]

Peculiarities in the Operations of three great Ovariomists, Wells, of London, Atlee, of Philadelphia, and Thomas Keith, of Edinburgh, by S. FITCH, M. D., Edin. [This paper was read before the Section on Obstetrics, of the American Medical Association in May, 1872.]

NOTICES.

Dr. John S. Butler has resigned the superintendency of the Retreat for the Insane, at Hartford, Conn. He has occupied this position for nearly thirty years, and has attained a high rank in the specialty. He is the President of the Association of Superintendents of Institutions for the Insane. We observe the fact that he has not retired from the profession, but has opened an office, in Hartford, for consultation on nervous diseases, where we trust his success will equal that acquired in his official relations to the Institution.

Dr. James H. Denney, for some years assistant physician at the Retreat, has been promoted to the position rendered vacant by the resignation of Dr. Butler.

—Dr. Walter Kempster, second assistant physician of the New York State Lunatic Asylum, at Utica, has been appointed Superintendent of the Northern Wisconsin Hospital for the Insane, located at Oshkosh, Wis. He closes a period of nearly six years service in this Institution, with the regret of all who have been associated with him, and with the confidence of all that he will attain an enviable success in his new position.

—The Trustees of the State Lunatic Hospital, located at Worcester, Mass., have commenced the erection of a new institution, upon the ground purchased some two years ago, near Lake Quinsigamond. The plan adopted contemplates a building some 1,200 by 400 feet in its extreme outlines, and includes a central building with wings on each side, falling back by retreating angles, *en echelon*. The material will be either brick or stone, and will be put up with little ornamentation. We note this as a marked departure from the original plan presented, and strongly urged, of separate cottage structures.

NAMES AND ADDRESS OF THE MEMBERS OF THE
ASSOCIATION OF MEDICAL SUPERINTEND-
ENTS OF AMERICAN INSTITUTIONS
FOR THE INSANE.

HENRY M. HARLOW, M. D., Hospital for the Insane, Augusta, Maine.	JAMES W. WILKIE, M. D., State Lunatic Asylum for Insane Criminals, Auburn, N. Y.
J. P. BANCROFT, M. D., Asylum for the Insane, Concord, N. H.	EDWARD R. CHAPIN, M. D., King's County Lunatic Asylum, Flatbush, N. Y.
W. H. ROCKWELL, M. D., Asylum for the Insane, Brattleboro, Vermont.	R. L. PARSONS, M. D., City Lunatic Asylum, New York.
GEORGE F. JELLY, M. D., McLean Asylum for the Insane, Somerville, Mass.	D. TILDEN BROWN, M. D., Bloomingale Asylum, Manhattanville, N. Y.
CLEMENT A. WALKER, M. D., Lunatic Hospital, Boston, Mass.	JAMES C. HALLOCK, M. D., Ward's Island Emigrant Hospital for the Insane, New York.
W. W. GODDING, M. D., Lunatic Hospital, Taunton, Mass.	THEO. H. KELLOGG, M. D., Ward's Island Lunatic Asylum, New York.
B. D. EASTMAN, M. D., Lunatic Hospital, Worcester, Mass.	J. D. LOMAX, M. D., Marshall Infirmary, Troy, N. Y.
PLINY EARLE, M. D., Lunatic Hospital, Northampton, Mass.	J. W. BARSTOW, M. D., Sanford Hall, Flushing, N. Y.
JOHN W. SAWYER, M. D., Butler Hospital for the Insane, Providence, R. I.	GEORGE COOK, M. D., Brigham Hall, Canandaigua, N. Y.
ABRAM MARVIN SHEW, M. D., General Hospital for the Insane, Middletown, Conn.	GEO. C. S. CHOATE, M. D., New York.
JAMES H. DENNEY, M. D., Retreat for the Insane, Hartford, Conn.	H. A. BUTTOLPH, M. D., State Lunatic Asylum, Trenton, N. J.
HENRY W. BUELL, M. D., WM. PORTER, M. D., Spring Hill Institution, Litchfield, Conn.	THOMAS S. KIRKBRIDE, M. D., Penn'a Hospital for the Insane, Philadelphia, Pa.
JOHN P. GRAY, M. D., State Lunatic Asylum, Utica, N. Y.	JOSHUA H. WORTHINGTON, M. D., Friend's Asylum for the Insane, Frankford, Philadelphia, Pa.
J. M. CLEAVELAND, M. D., Hudson River Hos. for the Insane, Poughkeepsie, New York.	D. D. RICHARDSON, M. D., Department for the Insane, Almshouse, Philadelphia, Pa.
JOHN B. CHAPIN, M. D., Willard Asylum for the Insane, Willard, N. Y.	R. A. GIVEN, M. D., Woodbrook Retreat, Kellyville, Delaware Co., Pa.

JOHN CURWEN, M. D., Penn'a State Lunatic Hospital, Harrisburg, Pa.	JOHN W. WHITNEY, M. D., Eastern Lunatic Asylum, Lexington, Ky.
S. S. SCHULTZ, M. D., Hospital for the Insane, Danville, Pa.	JOSEPH T. WEBB, M. D., Longview Asylum, Cincinnati, Ohio.
JOSEPH A. REED, M. D., Western Penn'a Hos. for the Insane, Dixmont, Alleghany Co., Pa.	S. J. F. MILLER, M. D., Southern Ohio Lunatic Asylum, Dayton, Ohio.
WM. H. STOKES, M. D., Mt. Hope Institution for the Insane, Baltimore, Md.	RICHARD GUNDRY, M. D., Lunatic Asylum, Athens, Ohio.
WM. F. STEUART, M. D., Maryland Hospital, Baltimore, Md.	WM. L. PECK, M. D., Central Ohio Lunatic Asylum, Columbus, Ohio.
CHARLES H. NICHOLS, M. D., Gov. Hospital for the Insane, Washington, D. C.	J. M. LEWIS, M. D., Northern Ohio Lunatic Asylum, Newburgh, Ohio.
D. R. BROWER, M. D., Eastern Lunatic Asylum, Williamsburg, Va.	E. H. VAN DEUSEN, M. D., Asylum for the Insane, Kalamazoo, Mich.
D. B. CONRAD, M. D., Central Lunatic Asylum, Richmond, Va.	ORPHEUS EVERTS, M. D., Hospital for the Insane, Indianapolis, Ind.
FRANCIS T. STRIBLING, M. D., Western Lunatic Asylum, Staunton, Va.	H. F. CARRIEL, M. D., Hospital for the Insane, Jacksonville, Ill.
T. B. CAMDEN, M. D., West Virginia Hos. for the Insane, Weston, West Va.	EDWIN A. KILBOURNE, M. D., Hospital for the Insane, Elgin, Ill.
EUGENE GRISSOM, M. D., Asylum for the Insane, Raleigh, N. C.	R. J. PATTERSON, M. D., Bellevue Place, Batavia, Ill.
J. F. ENSOR, M. D., Asylum for the Insane, Columbia, S. C.	A. S. McDILL, M. D., Hospital for the Insane, Madison, Wis.
THOS. F. GREEN, M. D., Lunatic Asylum, Milledgeville, Ga.	WALTER KEMPSTER, M. D., Northern Wisconsin Hospital for Insane, Oshkosh, Wis.
P. BRYCE, M. D., Hospital for the Insane, Tuscaloosa, Ala.	MARK RANNEY, M. D., Hospital for the Insane, Mt. Pleasant, Iowa.
WM. M. COMPTON, M. D., Lunatic Asylum, Jackson, Miss.	ALBERT REYNOLDS, M. D., Hospital for the Insane, Independence, Iowa.
PRESTON POND, M. D., Lunatic Asylum, Jackson, La.	C. K. BARTLETT, M. D., Hospital for the Insane, St. Peters, Minn.
G. F. WEISSEBERG, M. D., Hospital for the Insane, Austin, Texas.	T. R. H. SMITH, M. D., County Lunatic Asylum, St. Louis, Mo.
J. H. CALLENDER, M. D., Hospital for the Insane, Nashville, Tenn.	T. A. HOWARD, M. D., Missouri State Asylum, Fulton, Mo.
JAMES RODMAN, M. D., Western Lunatic Asylum, Hopkinsville, Ky.	J. K. BAUDUY, M. D., St. Vincent's Asylum for the Insane, St. Louis, Mo.

C. P. LEE, M. D.,	HENRY LANDOR, M. D.,
Lunatic Asylum, Ossawatomie, Kansas.	Asylum for the Insane, London, Ontario.
G. A. SHURTLEFF, M. D.,	JOHN ARDAGH, M. D.,
Asylum for the Insane, Stockton, Cal.	Branch Asylum, Orillia, Ontario.
J. C. HAWTHORNE, M. D.,	JOHN E. TYLER, M. D.,
Lunatic Asylum, Portland, Oregon.	Boston, Mass.
H. H. STABB, M. D.,	EDWARD JARVIS, M. D.,
Lunatic Asylum, St. John's, Newfoundland.	Dorchester, Mass.
— MACKESON, M. D.,	MERRICK BEMIS, M. D.,
Lunatic Asylum, Charlottetown, Prince Edward's Island.	Worcester, Mass.
JAMES R. DEWOLF, M. D.,	JOHN S. BUTLER, M. D.,
Hospital for the Insane, Halifax, Nova Scotia.	Hartford, Conn.
JAMES WADDELL, M. D.,	ISAAC RAY, M. D.,
Provincial Lunatic Asylum, St. John's, New Brunswick.	3509 Baring St., Philadelphia, Pa.
J. E. I. LANDRY, M. D.,	WM. S. CHIPLEY, M. D.,
J. E. ROY, M. D.,	Louisville, Ky.
Lunatic Asylum, Quebec, Canada.	ANDREW McFARLAND, M. D.,
JOHN R. DICKSON, M. D.,	Jacksonville, Ill.
Lunatic Asylum, Kingston, Ontario.	CHARLES H. HUGHES, M. D.,
JOSEPH WORKMAN, M. D.,	St. Louis, Mo.
Asylum for the Insane, Toronto, Ontario.	M. G. ECHEVERRIA, M. D.,
	New York.
	HENRY REIDEL, M. D.,
	New York.
	CHAS. W. STEVENS, M. D.,
	St. Louis, Mo.

AMERICAN

JOURNAL OF INSANITY, FOR APRIL, 1873.

CONIUM IN THE TREATMENT OF INSANITY.

BY DANIEL H. KITCHEN, M. D.,

Assistant Physician of the New York State Lunatic Asylum.

During the past eighteen months we have been pursuing special investigations with Conium in the Treatment of Insanity, aided by the Thermometer and Sphygmograph.

The preparations used were the succus conii, an imported article prepared by Ramson, Hitchin & Co., and the fluid extract made by Squibb, of Brooklyn, N. Y.

The dose of the succus which will produce the physiological action, is from a drachm to an ounce, according to the motor activity of the patient; men require larger doses than women. The dose of the fluid extract is from ℥xx to a drachm; ℥xx of the extract prepared by Squibb is equal to about a drachm of the succus conii. In the early history of the Institution, Dr. Brigham and more recently Dr. Gray, used the various preparations of conium with much benefit.

The following experiments were made upon a healthy person:

(1.) Experiment with $\frac{1}{xx}$ of the fluid extract. Temperature, $98\frac{1}{2}$; pulse, 76; respirations, 22.



In half an hour afterwards. Temperature, $97\frac{1}{2}$; pulse, 70; respirations, 22.



(2.) Experiment with a drachm of fluid extract. Temperature, 99; pulse, 80; respirations, 26.



In half an hour afterwards. Temperature, $97\frac{1}{2}$; pulse, 72; respirations, 25.



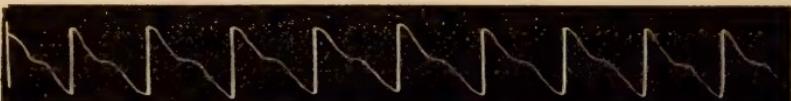
(3.) Experiment with two drachms of the succus conii. Temperature, 99; pulse, 84; respirations, 23.



In half an hour afterwards. Temperature, $98\frac{1}{4}$; pulse, 80; respirations, 23.



(4.) Experiment with half an ounce of the succus conii. Temperature, 100; pulse, 88; respirations, 26.



In half an hour afterwards. Temperature, $98\frac{1}{2}$; pulse, 80; respirations, 26.



From the above it will be observed that the temperature and pulse are both lowered without any apparent effect on the respirations. In these investigations we have administered and carefully observed its effects in 150 different patients in this Asylum, embracing cases of mania, melancholia, and hysteria. In attempting to appreciate correctly the physiological effects of conium, particular regard and attention must be given to the preparation used. Conium has a variable reputation as a medicine, caused mostly as we think by the uncertain preparations so long employed.

It is only within a very recent date that reliability could be placed on any of its preparations. Harley was the first to give any really satisfactory experiments to the profession, but all *Materia Medicas* speak highly of the drug when a pure article is obtained. The fluid extract is more commonly prescribed on account of its comparative cheapness. The succus conii is much more expensive and for various reasons more difficult to secure of a uniform character. In these experiments both with the fluid extract and succus, we have not failed to obtain a well marked sedative effect after a full dose; though using it largely, we have not discovered any injurious effects, as symptoms of poisoning, described by some of the older writers.

The succus is more palatable than the extract, and rarely, if ever, produces any unpleasant effects, while in a few instances the extract has caused slight nausea, even though well diluted with water. After administering these two preparations in different vehicles, we conclude that ice-cold water is the best. One hundred pounds of the succus conii, and seventy-five pounds of the fluid extract, were used in this Institution during the past year. Sphygmographic traces show the action on the heart. The temperature has been taken in a

large proportion of cases, showing an average reduction of from one to two degrees after the full physiological effects are induced. No appreciable effect is observed on the respiration, and no change in either quantity or quality of the urine.

The general effects of conium as given by all writers are very much the same. The most prominent we have observed, after repeated experiments, are general muscular relaxation; after the relaxation, quietness followed by calm sleep. The following physiological effects are observed in from ten to twenty-five minutes after a full dose is taken:

- (1.) Suffusion of the eyes and injection of the conjunctivæ.
- (2.) Giddiness and sensation of weight along the orbit.
- (3.) Dimness of vision and dilatation of the pupils.
- (4.) Inability to mental effort.
- (5.) Languor, muscular weakness with a strong desire to assume a recumbent posture.
- (6.) A dragging sensation in the limbs.
- (7.) Pulse and temperature lowered.
- (8.) Gentle glow of perspiration over whole body.
- (9.) Usually in half an hour the ordinary patient is asleep.

The majority of these sensations are observed in every instance. The whole motor functions of the patient under the influence of conium pass into repose. Harley says, conium in a state of health and in the fullest medicinal doses that can be given, exerts its power chiefly, if not exclusively upon the motor centers within the cranium, and of these the *corpora striata* are the principal parts affected. This appears in the great rapidity with which the paralyzing influence radiates through the body; so sudden and powerful is its action in full doses, that sometimes if the patient be standing at the time of its accession, he has scarcely time to throw out his arms and lay hold of some support to prevent himself from falling; and in

lesser doses there is sudden depression of muscular power. Again, many patients experience when the action of hemlock is at its height, a dull aching pain across the brows, over the roofs of the orbits, and at the back of the eye balls, sensations manifestly referrible to the *corpora striata*.

We have failed to discover any direct hypnotic effect as in chloral hydrate; yet sleep follows very rapidly, as it almost always follows muscular relaxation, and in a natural way. Patients describe the sensation produced by a dose of conium, as one of general lassitude and languor, and many compare it to the sticking of pins or needles in the flesh, or to the sensation produced by passing a comb or brush down the back. One very intelligent patient, in half an hour after taking one drachm of the fluid extract said it reminded her of the sensation of a gentle interrupted current of a galvanic battery. Patients readily become accustomed to its use, and in a few days do not mention any unpleasant sensations. Those given above are all referrible to the central ganglia of the spinal system.

The effect of conium upon the motor activity is more marked than upon the muscular strength. A full dose does not reduce the muscular power of the individual, but from free exercise he becomes tired and exhausted. Its action, however, differs in different persons. Those who lead an active life require larger doses, but its effect is readily perceived and more lasting. In cases of mania, muscular activity and endurance are present and prolonged to a remarkable degree; many persons apparently feeble will continue for weeks and months in a state of almost constant muscular activity, and rarely express weariness; these are particularly benefited by liberal doses of conium.

Harley claims to have demonstrated that it does not act directly on the brain.

It is said that "Socrates after swallowing the poisoned cup walked about for a short time, as he was directed by the executioner; when he felt a sense of heaviness in his limbs, he lay down on his back; his feet and legs first lost their sensibility, and became stiff and cold, and this stage gradually extended upwards to his heart when he died convulsed, his mind remaining clear and active up to the moment of his death." Whyte says of himself: "In a little more than half an hour after swallowing fifteen or twenty grains of the *extractum cicutæ*, I have been affected with a weakness and dazzling of my eyes, together with a giddiness and debility of my whole body, especially of the muscles of my arms and legs, so that when I attempted to walk I was apt to stagger like a person who had drunk too much strong liquor :" Dr. J. Chrichton Browne says, "conium soothes and mollifies the motor centers, especially when they are irritable and excited, and does not, as has been alleged, disastrously depress muscular activity; no weariness, weakness or oppression remains, and hence its great value in mania." Every physician appreciates the necessity of perfect rest in the treatment of disease, and especially is this so in mania and melancholia. The rest most desired is muscular relaxation ; and conium acting directly upon the motor centers gives us this. The full action of conium induces sleep; it operates on the whole motor tract, just as opium does on the brain; it quiets and renovates the whole muscular system; at first it seems to paralyze, but it is indirectly a tonic, for its continued administration almost invariably results in an improved condition of the general health. Its effect is the counterpart of that of strychnia, in that it quiets and conserves nervous energy and leaves the muscles to sink into rest, while strychnia excites and produces long and powerful contractions of the muscles.

The full physiological effect must be obtained in each instance or the most beneficial effect will not be secured. We have frequently observed the strong and powerful man in mania and melancholia, after taking a full dose, become quiet, and this state is very soon followed by prolonged sleep from which he awakes much refreshed. An eminent writer on conium says, "to give hemlock in doses that fail to produce an appreciable effect upon the motor system is to give repeatedly the hundredth of a grain of morphine to one dying for want of sleep, or a grain of quinia to cure an ague fit." Sufficient having been said upon the action of conium we will now consider its value in certain nervous diseases.

In this country it has been largely used in the treatment of epilepsy by Dr. Gonzales Echeverria, of New York. From a valuable paper published in the *Medical Times*, of Philadelphia, by Drs. Echeverria and Macdonald, we extract the following case :

Female, pregnant, 20 years of age. Her first epileptic fit occurred in 1862, upon her being severely beaten by her stepmother. Prior to her admission to the Hospital in 1870, the fits usually occurred at night and about twice a week. Her menses ceased two months before the latter date, when she became pregnant. She was ordered 20 grains of potassium bromide three times a day with succus conii; the dose of bromide was increased to 40, 50, 60, 70 and 75 grains three times a day with one and a half drachms of the succus, which she had taken repeatedly in the months of September, October, November and December; she had 16 fits during September; 18 in October; 6 in November; one in December occurring on the first. Notwithstanding the very large doses of bromide of potassium given in the above different periods and the amount of succus conii uninterruptedly administered to the patient, the fœtus gave the usual signs of life, and the mother was in good general health, showing no ill effects whatever beyond a slight cutaneous eruption produced by the bromide. In March following the patient was delivered of a child, and was not in any manner affected by the large narcotic doses of conium.

We have given Squibb's fluid extract of conium in eleven cases of epilepsy of long standing, complicated with dementia; fits were lessened somewhat in number and in severity, though none were entirely relieved. We believe conium is of the highest value in this disease, while it can do no harm; under its long continued administration the general health of the patient improves, as it does not in any way interfere with digestion or any of the secretions.

In several cases of facial erysipelas with great restlessness, while bromide of potassium proved to be of little use, conium relieved pain, and sleep followed. In two cases the physiological effects were kept up during the acute stage, with the happiest results to the patients. Prof. Mitchell, who has large experience in the treatment of erysipelas by conium, says, "the combination of blue mass with the extract of hemlock unites a desirable soothing influence with a favorable alterative agency. I have employed this combination with the two fold intention named, in erysipelas that returned very frequently, affecting almost exclusively the face. By persisting in the use of pills containing one-half grain of the blue mass, with one grain of the extract for a few weeks, I have succeeded in so changing the diathesis as to lengthen the interval of attack from three weeks to six months, and at last to effect complete recovery."

A few cases of sciatica have received considerable relief by conium, and a number of cases of migraine dependent on dysmenorrhoea, were successfully treated by administering the succus conii a few days previous, continuing it through the menstrual period and a few days after. In these cases chloral hydrate gave only temporary and imperfect relief. In hysteria with epileptiform convulsions, conium given in full and repeated

doses affords much benefit. By repeated doses we control the tendency to hysteria, though by this we do not mean to say hysteria is permanently and invariably cured. The following is a case in point: a young woman, aged 19, last spring had an attack of acute mania, which lasted for several months; she became nervous, irritable, of an excitable temper, complained of pain in the head and loins, which was followed by an epileptiform seizure of short duration. After the fit the patient remembered all that transpired, and with the exception of slight nausea, was in her usual condition, though nervous. She continued to have frequent hysterical convulsions of an epileptiform character. Succus conii was given in drachm doses four times a day and continued. Since that time she has had only two fits, which were very slight and her general health has very much improved. Her appetite is good and she sleeps well at night, and at time of writing has shown no tendency to hysteria for more than two months.

At the West Riding Lunatic Asylum, Dr. J. W. Burman has made many valuable experiments with *conia* hypodermically administered. The Doctor used the following solution :

R^c Conia ʒ ii, ℥ xii.
 Acid. Acetic. Fort. ʒ iii, ℥ xl.
 Spts. Vini. Rect. ʒ i.
 Aquæ Destillatæ ad ʒ ii, misce.
 ℥ v of the solution = ℥ i of Conia.

He says :

After having injected ℥ x of this solution in my right arm, I went off immediately to play billiards; there was considerable local smarting for a few seconds after the injection; in fifteen minutes there was confusion of vision and slight weakness of the legs; in twenty minutes there was some numbness and tingling of the arm as well, and the eyelids felt heavy; in twenty-five minutes the weakness of the knees and legs was more marked, and

there was a certain amount of unsteadiness in my gait, as I walked around the table; in thirty-five minutes the numbness and weakness of both arms and legs were well marked, and I felt that I handled the cue awkwardly, and that when standing still there was an inclination to sway backwards and forwards, while the knees began to give way under me; my voice was now rather thick, and I mumbled my words somewhat when speaking; in forty-five minutes I was fast losing all interest in the game, and doubted whether I could go on with it, but I managed to do it by great effort; there was now much confusion of vision, and the weakness of both arms and legs intensified; I could not now walk without staggering; in one hour and ten minutes I had finished the game of billiards and left for a walk; my legs were stiff and awkward in motion, and it was just as much as I could do to get along; I had to progress slowly; there was a great feeling of calm tranquillity and some slowness of mental processes, in fact all my movements were slow and labored; I felt with regard to my limbs as if I was getting up to walk after a short rest at the end of a day's good pedestrianism, and altogether a quiet rest on the sofa would have been most acceptable to me. It was now only possible to get up stairs with the greatest effort, and I did so in a very awkward manner, and often knocked my toes against the steps; but strange to say, I felt it more difficult to go *down* than *up*. When I sat down, I had to let myself drop suddenly, when within a few inches of the seat. As the sequel showed, the effects were now at about their maximum intensity; but I continued to keep moving about. In an hour and thirty-five minutes vision was about right again, and the effects were diminishing in intensity; the feeling of calm and tranquillity was still great. In two hours and twenty minutes the legs were nearly all right again, but the arms were still weak. Three hours after the injection I felt quite well again, and I sat down and ate a hearty dinner, feeling not the worse for the experiment on myself.

This paper is not intended to be an exhaustive one on conium, for we have not even referred to many valuable experiments on animals, and only present it as a contribution to the results already obtained. We have confined our remarks to clinical cases with a view of adding something to its real therapeutic value.

CONCLUSIONS.

We repeat to some extent a few of our remarks on the action of conium :

1. Muscular relaxation.
2. Duration in proportion to dose.
3. Physiological effect in proportion to purity of the article used.
4. The brain is not affected directly by conium.
5. Pulse and temperature both reduced after a full dose.
6. A gentle perspiration cover the whole body as soon as the physiological effects are observed.
7. No appreciable effect on any of the secretions.
8. Quietness lasts from two to four hours, and then disappears, leaving only a sense of lessened muscular energy.
9. Conium, not acting on the brain, may safely be given in all febrile diseases.
10. Conium, when applied to the skin, causes slight redness.

Dr. Burman gives the following conclusions from the hypodermic injection of conia :

1st. Conia is too powerful and too irritant to be administered internally alone ; but when neutralized with acid and in bland solution, there is no reason why it should not be used internally, in suitable doses, and thus produce well-marked cicutism without any topical irritation.

2d. Pure conia may be injected under the skin, in large quantities, without leading to any result except the formation of an abscess, or the production of considerable local irritation at the site of injection.

3d. Conia, neutralized with acetic or hydrochloric acid, and dissolved in spirit and water, acts very rapidly and powerfully, when subcutaneously injected, in pigeons, frogs, guinea-pigs, rabbits, dogs, and cats ; and, when thus used in doses of from mss to mij , in the healthy human subject, it produces well marked cicutism.

4th. Thus administered, it may be used therapeutically, in doses of from mss to mij , in cases of *mania*, with the result of subduing motor excitement, warding off emaciation and exhaustion, and promoting recovery. The strongest conia may be thus administered, commencing with doses of mij and gradually increasing, in proportion to the motor activity of the patient, until decided physiological effects are produced.

5th. When thus administered, the use of conia does not lead to any disturbance of the digestive function, interference with the circulation, or any considerable local irritation.

6th. The most suitable cases for treatment by the hypodermic injection of conia, neutralized and in solution, are those of *acute mania*, where the brain lesion is not *organic*, and where medicine, if given by the mouth, would require to be administered with the stomach pump.

7th. Conia, acting upon the purely motor centers, in a sedative manner, and morphia acting in a similar way on the sensori-motor and ideo-motor centers, it follows, as a fair corollary, that the combination of the two, in subcutaneous injection, should lead to effects directly antagonistic to the condition of maniacal excitement; and such being, in fact, the case, they may be thus used together, with very great success in the treatment of cases of mania.

8th. Conia might be very useful, as a subcutaneous injection, in cases of poisoning by strychnia, as well as in tetanus, hydrophobia, and other spasmodic diseases.

9th. Specimens of conia, as obtained from *different* sources, vary very considerably in appearance and strength, and they may be rendered dangerous or unfit for use, in the human subject, on account of impurity. Too much caution can not, therefore, be observed in the first use of a new specimen, until its strength is ascertained.

10th. Conia, as obtained from chemists in England and Scotland, is manufactured, for the most part, abroad. The best and purest conia is prepared from the *seeds* of the *uncultivated* plant, and, in order to avoid variability, all supplies of it should be drawn from some *one* good manufacturer, with directions that it should be so prepared.

11th. An increased demand for conia is all the stimulus that is required to lead to the production of a crystallizable salt of it, of stable and uniform strength, and sufficiently soluble in water for the purposes of subcutaneous injection.

12th. Less of the best conia (costing $\frac{1}{4}$ d.) subcutaneously injected, neutralized and in solution, is equivalent in action to about fl oz j of the best *succus conii* (costing 2d.), administered by the mouth.

CASE 1.—Man, age 28, married, carpenter, common education, uses tobacco and liquor; admitted to the Asylum in January, 1872. Patient was a large well

built, powerful man, and had enjoyed good health till present attack. First symptoms of insanity were noticed early in 1871, when he became irritable and ugly to his wife, talked incoherently and constantly, developed rapidly delusions of wealth, had hesitancy in speech, spoke very indistinctly at times, had delusion that he was Governor of the State, and afterward the President. Hesitancy of speech, with muscular twitchings of the face increased. On admission, was anæmic and thin in flesh, excitable, spoke very slowly, and with difficulty; tongue tremulous, gait staggering, had delusions of great wealth, was coherent in speech; said he had slept very irregularly for some time previous, and then only under influence of morphia hypodermically administered. After admission became very much excited, was noisy and destructive, repeated over his delusions; was given mxx of fluid extract of conium without any apparent effect; in half an hour same quantity repeated; in an hour afterwards he was quiet, asked to lie down, and slept two hours; in the evening the same dose was repeated, and patient slept all night.

The following day he was much excited and incoherent; conium was now ordered in mxx doses four times a day. He had several paretic seizures after admission, and was somewhat disturbed at these times, but the greater part of the time was quiet. The medicine was continued for ninety days, and he improved much in general health. In April, he was removed by his friends, they thinking he was about well, notwithstanding our opinion as to the unfavorable future before him. In this case the conium secured comfortable sleep, did not interfere with digestion, and kept the patient quiet during the day.

CASE 2.—Man, age 56, married, physician and dentist; has used liquor and tobacco to excess; native of

New York; admitted to the Asylum in January, 1872. Patient has enjoyed a lucrative practice for thirty years, and always had good health until 1865, when he had an attack of mania brought on by exposure and excessive drinking. From this attack, which lasted about a month, he seemed to have fully recovered. He soon resumed his professional duties, and was apparently well until about three years ago when he became gloomy, neglected his duties, and was very absent-minded. This state continued, and in the latter part of 1871 he visited Europe, and consulted the most eminent physicians. For a time he seemed to improve, gained in flesh and strength, and his appetite was good. Soon after his return, just before admission, he became very melancholic, was suspicious of his family; talked of suicide, lost his regained flesh and strength; was wakeful, though anodynes of various kinds were administered. On admission, was very pale and anaemic, thin, and looked haggard, feeble in mind, suspicious; said he was brought here to be killed; asked protection of the doctors, saying his family would starve, and go to the poor house; had not taken food for some days previous; was given milk punch and half a drachm fluid extract of conium the evening of admission. He slept all night and the following morning was cheerful and said he felt much better. The conium was repeated in mxx doses three times a day; patient complained, after each dose, of smarting over his eyes, and a dizziness and dragging sensation in limbs, so much so that he always wanted to lie down after taking his medicine. He continued quiet and slept well each night till February 5th, when he became disturbed, said he was going to have a movement from his bowels that would flood the ward, and that his family were all in the asylum on his account. A drachm of the

fluid extract was now given at once; in twenty minutes he was quiet, and in half an hour was asleep. The medicine was then given as before, and patient has continued quiet and slept regularly since. It was stopped in August last, and in January, the patient was discharged.

We present the pulse traces:

At the time of admission.



After one month.



After three months.



After six months.



CASE 3.—Man, aged 27, married, two children, tanner, uses tobacco and liquor; native of New York; paternal aunt insane; admitted to the Asylum March, 1872. Patient was always in good health till seven weeks before admission, when he fell from a load of hay and injured his head; symptoms of insanity were at once developed; he became noisy and excited, was incoherent, had paroxysms of violence in which he became very destructive, and was in restraint a great portion of the time. Was brought to the Asylum in handcuffs, was talkative and incoherent; pupils widely

dilated, face and hands congested, tongue moist, had not taken food for three days; had been under medical treatment since attack began, but medicine did not seem to have any appreciable effect. After going to the ward was given a drachm of the extract of conium; was very noisy for an hour, when he suddenly became quiet and asked to lie down; he continued quiet for about four hours, when he had a severe paroxysm of noise; was now put on π_{xx} doses four times a day; was more or less disturbed for a week or ten days, when he became quiet and seemed to realize his condition; from this time began to walk out and rapidly improved; conium was continued at night for two months; in June, discharged recovered. In this case, marked quietness followed the administration of each dose, and the diminution of motor excitement was gradual.

CASE 4.—Man, age 21, single, farmer, uses tobacco; native of New York; no hereditary tendency to insanity; admitted to the Asylum in January, 1872. Patient was a large muscular man, and had enjoyed unusually good health till June, 1871: while working in harvest field had partial sunstroke from which he rallied and seemed to recover in about four weeks. In August following, symptoms of insanity were developed; complained of intense pain in his head, was unable to do any work; following this he became gloomy and despondent, was seclusive, refused to go to the table with the family, would not see his friends, was wakeful and restless, frequently sitting up almost all night. On admission, was thin in flesh, complexion sallow, pupils dilated, tongue coated, bowels constipated. Was put on bromide potassium at night in doses of twenty grains; this was continued for two weeks patient sleeping only a part of each night, and looking more haggard than when admitted; bromide was stop-

ped, and fluid extract conium was given in mxx doses at night; sleep followed and he began to improve, became more cheerful, talked freely of his condition and of the effect the medicine was having on him. Conium was continued till his discharge in April, 1872. Patient gained 20 pounds. Discharged, recovered.

CASE 5.—Man, age 57, married, farmer, seven children, common education, native of New York; admitted to the Asylum, February, 1872. Patient was of feeble constitution but actively engaged in business, and had periods of exhilaration and depression. About twenty years ago he had an attack of melancholia, from which he recovered, but since that time has had a number of marked periods of depression. For six months previous to admission he was melancholic, suspicious of his wife and family, thought they were plotting to kill him, and expressed other delusions of a depressing nature; on admission, was very much emaciated, anaemic, pulse feeble, pupils dilated, eyes injected, voice tremulous, and bowels constipated. For two days following was gloomy, ate very little and was up about his room most of the night; the day afterwards, being the third after admission, he was put on fluid extract conium mxx three times a day; he enjoyed a refreshing sleep each night and expressed himself satisfied to remain, "If I can only sleep and get rest." March 28, has slept well every night since conium was given; gained in flesh, dropped delusions and seems to realize his condition. In May he was discharged, recovered; patient's friends say he is in better health than at any time for the past twenty years.

CASE 6.—Man, age 61, married, thirteen children; laborer; uses tobacco and liquor to excess; native of Ireland; admitted to the Asylum, November, 1871. Usually enjoyed good health, and was always able to do his

day's work on the rail road. Six months previous, had been drinking, and lost flesh and sleep; about three weeks previous to admission, became manical and violent, had to be restrained and taken to jail to prevent him from killing his family; while there he was destructive, violent, abusive and obscene. On admission he was thin in flesh, pulse small and frequent, noisy and incoherent, hoarse from constant hallooing; was put on chloral and hyoscyamus at night, which was continued for a few days, but he slept irregularly, and about December 1st, became more disturbed. Conium was substituted, mxx four times a day, and after a few doses, he became quiet and slept well. The medicine was continued at night till March, 1872, when he was allowed to go home having been in a comfortable condition for some time; he however, began drinking as soon as he reached home. After remaining a week, he was returned, as acutely maniacal as on former admission; was given conium at once, which was continued for a week, when he became quiet and slept well, appetite slowly improved, and he gained in strength. Is in Asylum at present time, and about well.

CASE 7.—Woman, age 37, married, seven children, housekeeper, common education, uses snuff, native of New York; two sisters have been insane, and one a patient here; admitted to the Asylum March, 1872. Patient had always been in delicate health, but was able to be up and about the house. Twelve years ago, after the birth of a child, she had an attack of mania, which lasted about six weeks. She recovered from this attack and was in her usual health until about three weeks before admission, when she again became insane; had been sitting up at night with a sick mother and became thoroughly exhausted, lost flesh and strength, appetite failed, and was noisy and destructive at home. On

admission was very incoherent and talkative, and came in restraint; was ordered hyoscyamus and chloral, but during its continuance was as noisy as when admitted. Bromide potassium was now substituted with like results. In August, there had been no improvement, either mentally or physically, and she was very thin in flesh, and anaemic. Succus conium in drachm doses four times a day was now substituted; the effect was appreciable at once; she became quiet, slept well at night, was coherent in conversation, with a fair appreciation of her condition. During the month of August same dose was continued, but in September it was reduced to a drachm each night. This is still continued, and at the present time she is improving both mentally and physically.

CASE 8.—Woman, age 46, married, two children, housekeeper, common education, good habits, native of England; great-grandmother and great-grandfather were insane; admitted to the Asylum, in April, 1872.

She was in fair health until about eighteen years ago, when she was delivered of her first child; *procidentia uteri* followed and continues; has been taking medicine constantly since that time; about a year before admission symptoms of insanity were first noticed. She had hallucinations of sight, that people were in her room at night; said they were talking about her, and laughing at her, and complained that her husband was laying plans to kill her. This was soon followed by a paroxysm of maniacal violence which continued for some days, after which she was gloomy and melancholic. These paroxysms came on at irregular intervals for the past year, and at times were so severe that the patient had to be restrained; she was restless and slept very little, lost flesh and appetite. On admission was thin in flesh, face flushed, pulse rapid, was irritable and excited,

very abusive to her husband and those who accompanied her. She was carried to the ward, put on *succus conii* at once, and slept a portion of the night. The following morning she was noisy, destructive and incoherent. Two drachms were given and as soon as the physiological effects were observed, which was in half an hour, she became quiet and asked to go to bed; was kept under its influence for a few days, when the dose was lessened to one drachm three times a day. The medicine was continued for thirty days, during which time she had no return of the paroxysms, and was removed to the convalescing ward. Her appetite increased; she slept well, improved very much in general health, and in September was discharged, recovered.

CASE 9.—Woman, age 37, married, two children, housekeeper, common education, good habits, two paternal cousins insane; admitted to the Asylum in August, 1872. Patient had enjoyed fair health till about two years ago. At this time, while traveling, she became tired and exhausted, and had uterine haemorrhage, after which she gave birth to a still-born child. She became much depressed afterwards, and, unfortunately, fell into the hands of irregular practitioners, and soon developed delusions of a depressing nature. About two months before admission, was treated by a distinguished physician for ulceration of the *cervix uteri*, and was relieved. During this time she developed the delusion that she was called to preach; neglected her habits, became careless; on one occasion went from the sick bed to a house of prostitution to warn the inmates to repent; prayed constantly, lost in flesh, and large doses of hypnotics failed to procure sleep or quietness for even a short time. On admission to asylum was in a state of frenzy; was carried to ward; very much excited all the afternoon; thin in flesh and anaemic;

labored under delusion that a serpent controlled her actions, and thought it was the devil; said she was afraid it would impregnate her; would run across the ward, frightened, saying she saw the serpent. At 8 p. m., on the night of admission, was given a drachm of the succus conii; in about half an hour she was perfectly quiet, and perspiring freely; slept four hours during the night. She continued in an excited condition for about ten days, when she became quiet and slept well every night; appetite began to improve. The medicine was given for thirty nights, when it was discontinued. Although the patient retained delusions, she became quiet and comfortable, and improved so much in general health, that she was removed, and has since recovered.

CASE 10.—Man, aged 34, single, clerk, common education, chews tobacco, and has used liquor moderately, but none of late; admitted to the Asylum, March, 1872. Patient was always in delicate health; about three years before admission had an attack of acute bronchitis which lasted four weeks, after which he became gloomy, depressed, and secluded himself; lost all interest in his business, and for a year after, remained idle. In fall of 1870 began to work again, but was not in a condition to do so. In January, 1871, had a convulsion, and was unconscious for two days; after this, grew worse, talked of suicide, but never made an actual attempt. From this time to admission was gloomy and depressed, lost in flesh, wakeful and restless at night; took chloral in large doses, and for a time slept well, but its effect was soon lost upon him. When admitted, was thin in flesh, anaemic, bowels constipated, tongue coated with a white fur, eyes injected, skin sallow, pulse small and wavy; temperature normal. He was not given anodynes for two days after admission, took little food, and did not rest well. Conium was ordered in π_{xx} doses,

three times a day, and a tonic was also given. In April he had gained twenty-five pounds in flesh, and had slept well nearly every night since the medicine was commenced; at times he is very much depressed, though he says he has not felt better for some years. Appetite has increased so that he now does without the tonic, and eats regularly. In July conium was stopped and in August, he had improved so much that friends removed him home, recovered.

CASE 11.—Woman, aged 21, married, one child, good habits, native of Connecticut; academic education; admitted to the Asylum, June, 1872. Patient was a delicate and nervous woman; at the age of thirteen began to complain of pain in her head; at sixteen had an attack of mania which lasted about three months, and at eighteen was married. On the evening of her marriage, she again became insane, and was taken to an asylum, where she remained five months, and was discharged recovered. After this, she went to Germany, where she remained two years, and there gave birth to her only child; had a natural labor and suffered no mental trouble. On her arrival home, she at once showed signs of mental disturbance; was excited and talkative; was kept quiet and alone for a few days, when she was herself again and continued in fair health till date of present attack, in June last. Then she became violent, noisy, destructive, abusive and very obscene; was brought to the asylum in this condition, thin in flesh and anæmic, pulse small, pupils widely dilated; breath foul, bowels constipated; was at once given hyoscyamus and chloral, and put on tonic treatment. This was continued till the 1st of August, when she was put on fluid extract conium in $\frac{m}{x}l$ doses. She continued maniacal for a few nights, then became quiet, but was incoherent and very talka-

tive. After this she was very comfortable, and slept without aid of sedatives till September 1st, when she again had a paroxysm of noise and had to be restrained. She was now put on succus conii in drachm doses, every night at bed time; and in three days became quiet and began to improve. The medicine was given at irregular intervals, and regulated according to her desire for sleep, and she steadily improved, in both mental and physical health and was discharged recovered, November, 1872; at date of present writing, patient says she never enjoyed better health.

CASE 12.—Man, age 27, married, two children, engraver; uses tobacco and liquor to excess; no hereditary tendency to insanity; admitted to the Asylum in April, 1872. Patient has practiced self-abuse since the age of fourteen; at twenty-one was married, and discontinued the practice for a few months, but began again; had gonorrhœa a number of times, but no other venereal trouble. For a year previous to admission, had been drinking to excess and frequently visiting houses of prostitution. In January, 1872, developed first symptoms of insanity; began to neglect his business; made mistakes in his work and was careless. His employer attributed it to excessive drinking, as five gallons of alcohol were missing from the store, and he acknowledged that he had drunk it. A change in his speech was at first noticed, a thickness, with difficulty in articulation; called on his friends and had no recollection the day after of having done so; walked fifteen miles and informed a family that he came all that distance to remain over night, and that no other house could accommodate him; was gloomy and depressed and made an attempt to cut his throat with a pen knife. On admission had considerable difficulty in speech; talked slowly and with great care, muscles of right

cheek slightly contracted, and sensation somewhat less than on the left side. His tongue was very tremulous and inclined to right side, but there was no history of a paralytic attack. The pupils were largely dilated, skin sallow, pulse small; no marked delusions; had been more or less wakeful for a month past and taken largely of anodynes, especially chloral; looks haggard, which he says is from want of sleep. For the first week after admission was very much depressed and despondent, always asking if he would get well, and insisting that he had softening of the brain; had great tremulousness of hands and tongue, and disturbance of speech, but no delusions; given tonic with conium, at night. June 25, no marked mental change; to-day had an eruption of semi-confluent small pox; was given bromide potassium and conium, alternately, and kept quiet. He slept well, made a good recovery from the attack, and July 25, was able to return to wards, when he improved rapidly, and in August was discharged, recovered.

ELECTRICITY AND LIFE;

AFTER RECENT WORKS ON EXPERIMENTAL PHYSIOLOGY.

- I. *Treatise on Medical Electricity.* By Drs. ONIMUS & LEGROS : 1872. II. *Treatise on Localized Electrization.* By M. DUCHENNE, of Boulogne: 1872. III. *Electro-Therapeutics.* By Dr. MORITZ BENEDICKT, Vienna : 1870.
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An article in "Le Revue des deux mondes," August 1st, 1872. By FERNAND PAPILLON.

In the year 1794, Galvani discovered that the muscles of animals contracted when they came in contact with certain metals. According to him, this contact simply provokes the discharge of a fluid inherent in the

animals themselves. The fact was incontestable, not so the explanation. Great discussion followed in the schools of physiology. Happily, it was understood that the difficulty could not be solved without experiments. An immense number were made, and to the most memorable remains attached the name of Volta. Alexander Volta maintained against Galvani, that the electricity which causes muscular contractions, far from originating in these organs, is introduced into them by the metals which are used. In order to prove this, he constructed in 1800 the pile which bears his name; that is to say, an apparatus where the combination of two different metals becomes an abundant source of electric fluid. Galvani and Volta were two minds of the highest order, profoundly learned in physics and physiology, and who never took unprofitable steps. Their discoveries served as a point of departure for one of the most admirable movements known in the history of science. Both were right. Science to-day proves that there is an electricity proper to animals, as Galvani held. It also proves that the electricity produced by external causes has an influence upon animals, as Volta taught. From a profound knowledge of these two orders of phenomena, science deduces methods for the cure by electricity of a great number of diseases. To show the relations between electricity and life, it is necessary to consider first the electricity which exists naturally among animals, as does heat, then to show the action of this fluid upon the organism, whether in a healthy or morbid state. This will complete the account that has appeared in the *Revue* of the relations between life and light, and life and heat, relations which we may to-day consider as forming the outlines of a new science.*

* See *Revue* for August 15, 1870, and January 15, 1870.

I.

The most authentic proofs of the existence of animal electricity are to be found in fishes. The torpedo, the mormyrus, the silurus, the malapterurus, the electric eel and the ray spontaneously develop a more or less considerable quantity of electricity. This fluid, the production of which is wholly under animal control, is identical with that of the ordinary electrical machines. It gives the same shocks and the same sparks when it is of a certain intensity. The apparatus when it is formed, consists of a series of small discs of a special substance, which are separated from one another by cells of laminated tissue. To the surfaces of these discs are distributed delicate nerves, which terminate there, and the whole represents a sort of membranous pile, situated, ordinarily, in the region of the head, sometimes towards the tail.

These fishes are the only animals provided with a special apparatus for the production of electricity; but all animals are electric, in the sense that there is constantly forming in the interior of their organs a certain quantity of fluid. The existence of an electricity proper to the muscles and nerves, and independent of their characteristic activity, has been established by numerous experiments, particularly by those of Nobili, of Matteucci, and of M. DuBois-Reymond. To prove the existence of currents of nervous electricity, we need only take the muscle of a frog, and touch it at two different points, with the two extremities of a nervous filament of the same animal. The muscle then contracts under the influence of the nervous current. An other equally simple experiment proves the existence of the muscular current. A muscle of a living animal, or one recently killed, is laid bare, an incision is made

perpendicular to the direction of its fleshy fibres, and then the two wires of a very sensitive galvanoscope are connected with the natural surface of the muscle, and the surface obtained by the incision. The needle of the instrument betrays the passage of a current. This muscular electricity can be obtained in considerable quantities by the super-position in the form of a pile, of a certain number of pieces of muscle. The positive pole of the system will be the natural surface of one of the end pieces, and the negative pole the cut surface of the other. Such a system acts upon the galvanoscopic apparatus, and can even excite contractions in other muscles.

There exist in the animal economy other sources of fluid. There are currents created between the external and internal surfaces of the skin, in the blood, in the secretory apparatus, in a word, in almost every part of the organism. Experiments, as original as they are delicate, to which M. Becquerel has devoted during several years all the activity of a green old age, enable him to affirm the preponderance of electro-capillary phenomena in animal life. According to this learned physicist, two different solutions, conductors of electricity, separated by a membrane or by a capillary space, constitute an electro-chemical circuit, and, if we consider the anatomical elements of the different tissues, cells, ducts, globules, etc., in their relations to the fluids which bathe them, we find that they originate an infinite number of pairs, which incessantly disengage electricity. The arterial and the venous blood form a couple, of which the force is 0.57, that of a couple of nitric acid being 100. Becquerel shows how these currents explain many physiological phenomena, which up to this time have been little understood. If we can not deny the reality of such actions, it is necessary to

acknowledge, nevertheless, that the general doctrine which binds them, one to the other, and all together with the various activities of the organism, is still quite obscure. It is important to know how the currents are distributed and propagated, and their exact course. The time has arrived for experimental physiology to enter upon these difficult problems, the solution of which is indispensable to the precise knowledge of *vital determinism*, that is to say, to the enumeration and the measurement of the various factors which are the terms of all the equations of organic movement.

Vegetables also develop electricity. Pouillet has clearly proved that vegetation disengages electricity. Other physicists, and above all, M. Becquerel, have demonstrated the existence of currents in the fruits, the stems, the roots and the leaves of plants. M. Becquerel took a stem of a young poplar full of sap, introduced a platinum wire into the pith, and a second wire into the bark, and attached these two conductors to a galvanoscope; the needle indicated at once the passage of a current. M. Buff has recently performed experiments, in which he has taken care not to injure the organs of the plants. Two jars containing mercury received the platinum wires; upon the mercury was some water, in which the vegetables, the electric state of which was to be studied, were immersed. Taking the leaves and the roots, M. Buff discovered a current which went from the roots to the leaves through the plant; in a branch separated from the stem, the current flowed also towards the leaves. In fine, the existence of vital electricity is indisputable, although we do not yet know exactly the conditions of this intestinal effervescence, and are ignorant of the true relations existing between it and the whole of the physico-chemical operations of living organism.

These last are always extremely complex. There is in us, and in every organized being, a world of infinite activities of every kind. The forces which pervade us are as manifold as the materials of which we are composed. In every particle of our body, and at every instant of our existence, all the energies of nature meet and conjoin. Nevertheless, there reigns in the course of these marvellous operations such order that, instead of inextricable confusion, a harmonious *synergy* characterizes beings endowed with life. Everything in them balances, and is at an equipoise. Buffon had already perceived and expressed this thought: "The animal unites in itself all the powers of Nature; each individual is a center to which all is referred, a point where the entire universe is reflected, a world in miniature." Profound words of the great naturalist, rather the fruit of an intuition of genius, than of rigorous speculation,—words that the progress of science tends to verify more and more, and which are as a bright light upon its path.

After having ascertained that living bodies are themselves sources of the electric fluid, we are prepared to examine the nature of the effects that electricity, under its diverse forms, can exercise upon the animal organism. The atmosphere contains a variable quantity of positive electricity; the earth itself is always charged with negative electricity. It is not exactly known how this diffused and secret force is developed. Physicists think that it comes from vegetation, and the evaporation of water. M. Becquerel has enumerated a number of reasons more or less plausible which authorize the belief that the greater part of atmospheric electricity has its origin in the sun; thus this heavenly body diffuses electricity as well as light. Be this as it may, so long as the sky is clear, this fluid has no manifest

action on living beings; but, when it accumulates in the clouds, and gives rise to showers, it produces effects that furnish the most demonstrative proofs of the influence that electricity exercises upon life. Persons killed by lightning present very different aspects. Sometimes the victim of the thunder-bolt is struck dead on the spot, and remains there stiffened into a corpse, seated or even still standing; sometimes he is thrown to a great distance. Sometimes the lightning tears the clothes from its victims, and leaves the body intact, or the inverse takes place. Or, again, its ravages are frightful to contemplate; there is rupture of the heart, and breaking of the bones: in other cases, the organs are found uninjured. In certain cases there is general flaccidity, softening of the bones, compression of the lungs; in others, again, we see contractions and rigidity. Sometimes the body of the person killed by lightning decomposes with rapidity, or, again, it defies putrefaction. In fine, the lightning, which breaks trees, and overthrows walls, seems to produce but rarely mutilations in animals. If the stroke does not terminate in death, it causes at least very grave accidents, sometimes temporary only, but more frequently irremediable. Not to mention burns and various eruptions remarked upon the skin of the persons struck, these accidents are often attended with the strange result of the loss of the hair from all parts of the body; the sufferers are attacked with paralysis, with mutism, perversion of the senses, with amaurosis, deafness, imbecility. In short, the ravages of atmospheric electricity attack all the functions of the nervous system.

The action of electrical fishes may be compared to that of lightning, for its manifestation is equally independent of human efforts. The shocks of the electrical eel are especially formidable. Alexander Von Hum-

boldt relates that having placed both feet on one of these fishes, which had just been taken from the water, he received so violent a shock that he experienced during the rest of the day severe pain in all his joints. These shocks overthrow the most vigorous animals, and the rivers in which the *gymnotus* is found are avoided, because, when a ford is to be crossed with horses or mules, they may be killed by the discharges. To catch these fishes, the Indians drive into the water wild horses whose stamping makes the eels come out of the mud. These species of eels are of a yellowish and livid hue. They press beneath the bodies of the horses, overthrow many and kill some of them; but the fishes become exhausted in their turn, so that it is easy to catch them with small harpoons. The savages make use of them to treat paralysis. Faraday compares the shock of a *gymnotus*, which he had occasion to study, to that of a battery of fifteen jars. When we touch with the hand a living torpedo taken from the water, a shock is felt, the stronger as the surface of contact is more extended. The shock, which makes itself felt up to the shoulder, is followed by a very disagreeable numbness. It can be made to go through twenty persons, forming a chain, the first touching the back, and the last the belly of the torpedo. The fishermen know that there is a torpedo in their nets, when on throwing water on them by pails full, to wash them, they feel a shock. The water is a good conductor of electricity, and it is through the water that this fish kills or benumbs the animals on which it feeds.

There exist, as every one knows, other sources of electricity besides storms and fishes. Frictional machines, galvanic batteries, and induction machines produce three sorts of currents which act upon the functions of life, sometimes in a similar manner, but

oftener with marked differences. These differences in the mode of action of the divers currents have not been well established until our day. The more sudden and more violent action of static and induced electricity is especially characterized by mechanical effects so striking that they have for a long time prevented observers from following with sufficient attention effects of another kind which the current of the pile produces. Yet the latter really affects much more profoundly the animal tissues, and the phenomena to which it gives rise are most interesting, as well from a theoretical as a practical point of view.

Dutrochet has demonstrated by memorable experiments that, if a tube containing gum-water and closed at the bottom by a membrane is placed in a vase filled with pure water, the level of the gum-water will rise little by little by the gradual introduction of pure water into the tube. At the same time a certain quantity of the gum-water inside mixes with the pure water outside. In brief, there is established between the two liquids communicating by the membrane a reciprocal exchange; and it is proved that the current which flows from the lighter to the denser liquid is more rapid than the reverse current. This experiment reveals one of the most important phenomena of animal and vegetable life, namely, endosmosis. Now Dutrochet had already observed, that if the positive pole of a battery is placed in the pure water and the negative pole in the gum-water, the acts of endosmosis are accomplished with more energy; MM. Onimus and Legros have discovered further that, if the inverse course is taken, that is to say, if the positive pole is placed in the gum-water, and the negative in the pure water, the level of the liquid in the tube instead of rising, descends considerably. Thus electricity can reverse the ordinary laws

of endosmosis. It exercises an action not less marked upon all the other physico-chemical movements which are carried on in the depths of the organs of the body. It decomposes the salts, it coagulates the albuminoid matters of the blood and the tissues, exactly as in the vessels of the laboratory. Here is one very curious example. When, in chemistry, ioduret of potassium is decomposed, the iodine is set free, and we recognize it by the intense blue color which is developed when it is brought in contact with starch. Now, on injecting into an animal a solution of ioduret of potassium, and afterwards passing the battery current through it, we ascertain that after a few minutes all the parts about the positive pole turn blue in presence of the starch, which proves that they are impregnated with iodine. The ioduret has been almost instantly decomposed, and the iodine has been transported by the current towards the positive pole.

After this, it is not surprising to find that the action of electricity is exercised over all the operations of nutrition. MM. Onimus and Legros have found that the continuous ascending currents accelerate the double movements of assimilation and disassimilation.* Animals which are electrified in certain conditions throw off a greater proportion of urea and carbonic acid. This is an indication of greater energy of the vital force. On the other hand, if you submit to the action of the current the young of animals in process of development, they grow and increase in size more quickly than under ordinary circumstances, which is proof of

*The electricity flows from the apparatus by two poles. It is admitted that the current circulates from the positive pole towards the negative. The current is said to be ascending when the positive pole is applied to a lower part, and the negative pole to the upper part of the spine; it is called descending when the poles are inverted.

an increase in the amount of assimilated material. To show how far vital phenomena are stimulated by electricity, we will cite another experiment made by MM. Robin and Legros on the noctilucæ. These are microscopic animals which, when they exist in great numbers in the water of the ocean, give it nearly the whiteness of milk, and render it at times phosphorescent. We have only to pass an electric current through a vessel full of this water, and at once a glimmer of light attends its passage. The electricity excites the phosphorescence of all the noctilucæ which it encounters on its passage between the two poles.

The interrupted or induced currents contract the blood-vessels, and diminish the circulation in nearly all cases; if they are intense, they succeed in arresting it by a strong contraction of the smaller arteries. It is not the same with the continuous currents: generally they accelerate the circulation by causing a dilatation of the vessels. This is at least what was first proved by MM. Robin and Hiffelsheim in the microscopic examination of the circulation of the blood under galvanization. MM. Onimus and Legros afterwards established that these actions are subject to the following law: the descending current dilates the vessels, whereas the ascending current contracts them. A startling experiment demonstrates the truth of this law. A portion of the skull of a robust dog is removed so as to uncover the brain. The positive pole of a sufficiently strong battery is then placed on the naked brain, and the negative pole on the neck. The small and superficial vessels of the encephalon contract visibly, and the organ itself seems to shrink. On arranging the poles in an inverse order, the contrary is observed: the capillary vessels distend, and the cerebral substance forms a hernia through the opening made in the skull.

This experiment proves that we can by means of electrical currents increase or diminish the intensity of the circulation in the encephalon, as well as in all the other organs. M. Onimus has very recently observed a no less interesting fact. It is well known that the celebrated physiologist Helmholtz has introduced into medical practice a simple and convenient apparatus called the *ophthalmoscope*, by means of which we can see very distinctly the interior of the eye, that is to say, the network formed by the nervous fibres and the delicate vessels of the retina. Now, on examining this network during electrization of the head, it is clearly ascertained that the little blood-vessels are dilated, and the color is deepened to a bright scarlet.

Now let us examine the effect of the electric current on the functions of motion and sensibility. Aldini, nephew of Galvani, undertook the first researches of this kind on man. Convinced that, in order to study the effects of electricity upon the organs, the body should be examined immediately after death, he believed it necessary, as he has told us, to place himself at the side of the scaffold and near the ax of the guillotine, in order to receive from the hands of the executioner the bloody bodies, the only proper subjects for experiment. In January and February 1802, he took advantage of an execution of two criminals, decapitated at Bologna, whom the government readily put at his disposal for the prosecution of his scientific researches. Under the action of electricity, these bodies presented such a strange spectacle that several of the assistants were frightened. The muscles of the face contracted, producing horrible grimaces. All the limbs were seized with violent movements. The bodies seemed to experience the commencement of resurrection, and endeavored to raise themselves. Many hours after

decapitation, the animal economy had still the power to respond by its activity to the electrical excitation. Ure made at Glasgow equally notable experiments upon the body of a criminal which had remained suspended from a gibbet nearly an hour. One of the poles of a battery of 270 jars having been put in communication with the spinal cord underneath the nape of the neck, and the other pole with the heel, the leg, previously bent upon itself, was violently thrown out and overthrew one of the assistants who was holding it with all his strength.

One of the poles having been placed over the seventh rib, and the other on one of the nerves of the neck, the chest rose and fell, and the abdomen showed a similar movement, as occurs in respiration. A nerve of the eyebrow having been touched at the same time with the heel, the muscles of the face contracted; "rage, horror, despair, agony and frightful smiles united their hideous expressions on the face of the assassin. At this spectacle many persons were obliged to leave the room, and one gentleman fainted away." Finally, convulsive movements of the arms and fingers were caused, so that the dead man seemed to be pointing at different persons among the spectators.

The latest researches have shown more exactly the conditions of this electrical influence upon the muscles. The continuous current applied directly to these organs produces contractions at the opening and closing of the circuit; but the shock produced at the close is always the stronger. As long as the continuous current is passing, the muscle remains half contracted, the explanation of which fact physiologists are not agreed upon. Under the influence of stimulation frequently repeated and prolonged for some time, the muscles enter into a state of contraction with shortening, analogous to that

which characterizes tetanus. In this state, as has been demonstrated by M. Helmholtz and M. Marey, the muscle receives a great number of slight shocks. The contraction is the result of the fusion of those elementary vibrations which can not be distinguished by the eye, but which certain contrivances enable us to recognize and even to measure. Induced currents cause more energetic contractions, but of no long continuance, and give place, if the electrization is prolonged, to a corpse-like rigidity. The muscular contraction induced in such a case is accompanied by a local elevation of temperature, proportioned to the force and duration of the electrical action. This heat attains its maximum, which may be 4° in certain cases, during the four or five minutes that follow the cessation of the electrization; it is due to the muscular contraction alone, which always gives rise to the disengagement of heat.

The action on the nerves is very complicated. It exhibits itself by movements and sensations of variable intensity. MM. Onimus and Legros thus recapitulate its fundamental laws: when the motor nerves are operated on, the direct or descending current is seen to act with greater energy than the other; the reverse is the case with the sensitive nerves. The excitability of the mixed nerves is diminished by the direct, and increased by the indirect current. So much for the battery currents. Induction currents act in a different manner. While the sensation provoked by the former is almost insignificant, the latter, in addition to the permanent contraction of the muscle, produces a pain which persists as long as the nerve retains its excitability. The spinal cord is one of the most active parts of the animal economy. Under the form of a large white cord, lodged in the interior of the vertebral column, it constitutes a true prolongation of the brain,

of which it supplies the place under many circumstances. The unconscious receptacle of a portion of the force which animates the limbs, it can transmit, by means of the nerves which it sends out to them, the command and the power to move, without the brain being aware of it. This is what takes place in the movements which we call *reflex*, and which are produced in decapitated animals by a simple irritation, direct or indirect, of the spinal cord. We will give some experiments which show the action of electricity on the phenomena of which the spinal marrow is the seat. If you plunge a frog into tepid water at a temperature of 40° centigrade, respiration, feeling and movement will cease, and death would follow if it was retained there long. Being taken out of the water in time and submitted to the action of the current, it contracts energetically when the vertebral column is electrified by the ascending current, but there is no movement if a descending current be employed. On the other hand, if the latter is applied to a decapitated animal in which reflex movements have been caused by irritation of the cord, it is ascertained that it tends to paralyze these movements. The general law then, as discovered by MM. Onimus and Legros, may be thus stated: the battery current, applied to the spinal marrow, increases, if it is an ascending current, the excitability of this organ, and, consequently, its faculty to cause reflex phenomena; it acts in a contrary manner, if it is a descending current. When one electrifies directly the brains of animals, there occur modifications in the circulation of which we have already spoken, but no special phenomena are observed. The animal manifests no pain or movement; it shows a tendency to sleep, a kind of repose and stupor. Certain physicians have gone so far as to propose to electrify the brain, as a means of de-

veloping and perfecting the intellectual faculties. Nothing authorizes us, up to this time, to believe that such a practice could in the least degree affect favorably the intellectual faculties. The real truth, on the contrary, is that electricity should not be applied except with great prudence to the region of the brain, where it may very easily produce disturbances. A strong current is very likely to cause a rupture of the vessels, and, in consequence, a serious hemorrhage.

Finally, electricity stimulates all the organs of the senses. Applied to the retina, it excites luminous sensations and dazzling. When it traverses the auditory apparatus, it produces a peculiar buzzing noise. Put in contact with the tongue, it causes a metallic and styptic sensation, quite characteristic in its nature. In fine, it develops in the olfactory mucous membrane a desire to sneeze, and, as it appears, an ammoniacal odor.

The currents do not act solely on the cerebro-spinal nerves and the muscles connected with life: they affect also the nervous system of muscles which serve the functions of nutritive life. Induced electricity applied to the muscles connected with nutrition makes them contract where the poles come in contact with them, but the parts lying between the poles remain motionless. The continuous currents produce, at the moment of the closing of the circuit, a local contraction on a level with the poles, afterwards the organ enters into repose; if it is in a state of activity, it ceases to move. In the case of the intestines, for example, the peristaltic movements are abolished; in an animal in the state of parturition, we can suspend by means of electricity the uterine contractions. In general, this agent suppresses the spasms of all the muscles that are not under the control of the will.

All these facts relating to the action of electricity on

the muscles and the nerves have given rise, particularly in Germany, to laborious speculations on the part of MM. Dubois-Reymond, Pflüger and Remak. The doctrines of these learned physiologists respecting the molecular state of the nerves in their different modes of electrization are still matters of controversy. Besides, they are not supported by any certain experiments; perhaps it is better to refer for the explanation of these difficulties to the ideas developed by Matteucci. This illustrious experimenter opposed to the German theories respecting the electrotonic powers of the nerves, the plain phenomena of electrolysis, that is to say, the chemical decompositions produced by the currents. He thought that the modifications in nervous excitability caused by the passage of electricity were to be attributed to the acids and the alkalies, proceeding from the decomposition of the salts contained in the animal tissues. We may add to this first order of phenomena the electro-capillary currents recently discovered by M. Becquerel. It is there that it is advisable to search for the profound causes of the complicated and obscure mechanism of this conflict between electricity and life.

The effects of electricity on plants have been less thoroughly studied. The experiments made on this subject are neither sufficiently numerous, nor rigorously exact. We know that electricity causes contractions in the different species of *mimosa*, and especially in the sensitive species, that it retards the movement of the sap in the cellule of the *chara*, etc. M. Becquerel has studied its action on the germination and development of vegetables. Electricity decomposes the salts contained in seeds, transfers the acid elements to the positive pole, and the alkaline elements to the negative pole. Now the first are injurious, while the last are favorable to vegetation. The same experimenter has

very recently made a series of researches concerning the influence of electricity on the colors of vegetables. He used the strong discharges furnished by frictional machines, and thus observed remarkable changes of color, due mostly to the rupture of the cellules which contain the coloring matter of the petals. This matter, deprived of its cellular envelope, disappears when washed merely with water, and the flower becomes almost white. In leaves which present two surfaces with different shades, as that of the *Begonia discolor*, M. Becquerel has ascertained a sort of reciprocal exchange of color from one surface to the other.

II.

The physiological phenomena which have just been discussed are generally confounded in the books with the facts of electro-therapeutics. We have thought it necessary here to distinguish the one from the other. The true method is to explain first the phenomena which occur in the healthy organism; this is the only method to pursue in order to understand afterwards those which characterize the diseased organism. Electro-therapeutics comprises a collection of methods which should be placed among the most efficacious of remedies, on condition that they be put into practice by a physician well versed in the theory of his art. In fact, the most advanced physiological knowledge is indispensable to the physician to enable him to take advantage of the electric current. Empiricism, even the best informed, is here condemned to a fatal impotence,—a fact which we commend to the attention of those who impute to the method itself the defects which it has suffered in unskillful hands. It is true that, since the times of Galvani and Volta, physicians have applied the battery current to the treatment of a great number of diseases.

At the commencement of this century, galvano-therapeutics made a great deal of noise. It was believed that the universal panacea was discovered. Societies, journals and books, devoted especially to galvanism, undertook to spread abroad its benefits. This fashion lasted for a while, and was about giving place to indifference, when the discovery of induced electricity, due to Faraday (1832) served to recall the attention of physicians to the properties of the electric fluid, and gave rise to a new and interesting series of experiments. It is, however, probable that the two systems of electro-therapeutics, after the incredible illusions which attended their first appearance had vanished, would have ended by falling into disuse, if they had not departed from the track of empiricism. Empiricism, which, with its habitual audacity, had succeeded in making for these systems so great a sensation, was not equal to the task of keeping them permanently in a high position. Experimental physiology, by analyzing with precision the mechanism of the effects of the fluid on the organic forces, gave to therapeutic applications the safety, certainty and reliability which they possess to-day. Blind art has been here, as everywhere else, the origin of scientific researches, and these, in their turn, enlighten art and constantly perfect it.

It is singular that the fortune of the induced currents has been much more favorable than that of the currents of the battery. The latter, the employment of which had inaugurated electro-therapeutics, did not assume any great importance in physiology and in medicine until the past few years, and when the reputation of the induced currents was already established, thanks to the efforts of M. Duchenne (of Boulogne). M. Remak, a German physiologist and anatomist, who died six years ago, was the first to lay stress upon the remarkable thera-

peutic virtues of the Voltaic current. After having devoted himself for twenty years to the study of the most difficult questions of embryology and histology, Remak undertook, from the year 1854, to search out and establish the method of action of the constant currents upon the animal economy. He soon succeeded in managing the electric agent with remarkable dexterity, and in clearly discerning the points where it was proper to apply the poles of the battery in each disease. Those who like ourselves were in 1864 the witnesses of his experiments at *La Charite* remember them very distinctly. The methods of M. Duchenne were almost the only ones received and practiced in France before Remak came to demonstrate to the physicians of Paris the efficacy of electrization by the constant current in cases where faradization was powerless. The teaching of the Berlin practitioner bore its fruit. Hiffelsheim, a rising young physician, had commenced to spread in Paris the use of the constant current as a therapeutic agent, when death carried him away in the flower of his age. Another physician who had profited by the lessons of Remak, M. Onimus, has taken up the interrupted labors of Hiffelsheim, and is at present occupied in establishing the harmony of electro-physiological laws.*

We shall see by some examples chosen from the mass of facts published on this subject, how far the actual efficacy of these methods extends.

Experiments have proved that in certain conditions the electric current contracts the vessels, and, in consequence, diminishes the flow of blood in the organs. Now a great number of diseases are characterized by a

*In the extraordinary session recently opened by the Academy of Sciences for the application of electricity to therapeutics, the first prize was given to MM. Onimus and Legros, and the second to two Russian physiologists, MM. Cyon.

too rapid sanguineous afflux, and, hence, are called congestions. Certain forms of delirium and cerebral excitement, and also many hallucinations of the different senses are of this nature, and are completely cured by the application of the electric current to the head. No organ possesses a vascular system so complete and delicate as the brain, and no organ is so sensitive to the causes which modify the circulation. It is for this reason that the diseases which have their seat in the encephalon are particularly easy to treat by electricity. The latter, wisely applied, is a sovereign remedy for cerebral crises, delirious conceptions, headache, sleeplessness, etc. The first physicians who made use of the electric current understood perfectly the happy influence of the galvanic fluid on the disturbances of the brain; they even thought to use it for the treatment of insanity. Researches have not been continued in this direction, but the facts published by Hiffelsheim authorize the opinion that they would not be unprofitable. These facts show how much service the electric currents, but the constant currents only, will some day be able to render in cerebral affections. This is a point to which it is important to call the attention of alienist physicians. Up to this time electricity has only been considered an energetic excitant. That which is true of the interrupted current is not true of the constant current. Far from being always an excitant, the latter, as is held by Hiffelsheim, can become in certain conditions a sedative, a soothing agent. This influence over the circulation, added to the electrolytic power of the battery current, makes it useful in the treatment of different kinds of congestions. By this means, congestions of the lymphatic ganglions can be cured, and also of the parotid glands, etc. The current acts both on the contractility of the vessels, and on the substance of which the fluids are composed.

It is above all in cases of paralysis that electricity shows its curative power. Paralysis occurs whenever the motor nerves are separated from the nervous centers by a traumatic cause, or by a change of their structure which causes them to lose their excitability. When the nerve is destroyed, the paralysis is incurable, but when it is only diseased, we can, in most cases, re-establish its functions by electric treatment. As there is then always a certain muscular atrophy, electricity is applied both to the nerves and the muscles, and the direct and induced currents are alternately employed. In general, the first modifies the general nutrition, and re-establishes the nervous excitability, the second stimulates the contractility of the muscular fibres. The difference in action of the two kinds of currents is manifested in certain cases of paralysis, where the muscles are no longer contracted by the induced current, whereas, under the influence of the constant current, they contract more than do healthy muscles. The experiments made, some years ago, at the laboratory of M. Robin on the bodies of executed criminals, proved that after death muscular contractility can still be excited by the Voltaic current, even when it does not respond any longer to the Faradic current.

When the motor nerves are in a state of morbid excitation they produce contraction of the muscles, which are permanent (tonic spasms) or intermittent (clonic spasms). The several motor nerves which are oftenest excited are the facial nerve, the nervous fillets of the fore-arm or the fingers, which are affected in *writers' cramp*,* and the fillets of the spinal nerve, whose excitation causes *tic douloureux*, chronic stiff neck, &c.

* *Writers' Cramp* consists of a sort of spasm of the muscles of the fingers which prevent them from contracting regularly so as to hold and direct a pen, or so as to press upon the keys of a piano, while the muscles of the hand and of the fore-arm still retain all their normal power.

But electricity cures or notably ameliorates these different morbid states. It also acts favorably upon neuralgic maladies and inflammations of the nerves, when, at least, these are not symptoms of other maladies more deep-seated in the system. The currents restore the normal activity of nutrition in the diseased nerves and the corresponding muscles; they also act most favorably in rheumatism, modifying the local circulation and exciting reflex phenomena, which are followed by muscular contractions. Erb, Remak, Hiffelsheim and Onimus have proved beyond question this salutary action in cases of articular swellings, both acute and chronic.

The discoveries respecting the influence of electricity upon the spinal marrow have been turned to account in the treatment of the diseases which result from excessive excitement of the activity of this organ, such as chorea, St. Guy's dance, hysteria, and other convulsive neuroses of a more or less analogous character. We adduce here two instances of the kind published by Dr. Onimus, to give an idea of the manner in which the current is applied in such cases. A child of twelve years was attacked with a frightful malady. At intervals of five or six minutes he lost his senses, rolled on the ground, turned up the whites of his eyes, then became so stiff that none of his limbs could be bent. The attack being over, he came to himself, but any little agitation was sure to throw him into the same state again. The ascending currents were first applied to the spine. The child was instantly seized with a violent crisis. The descending currents were next employed for fifteen consecutive days, at the end of which the patient recovered his health. A girl of seventeen years, suffering from hysteria, presented very strange symptoms on the side of the larynx, the vellum of the palate and the muscles of the face; among others, a sort of

barking, followed by intense sniffing and horrible grimaces. All these morbid phenomena were suppressed on placing the positive pole in the mouth of the patient against the vault of the palate, and the negative pole on the nape of the neck. The phenomena were, on the other hand, aggravated on arranging the poles in the inverse order. After sixteen repetitions of the electric treatment she was almost completely cured, and there only remained a muscular twitching, insignificant in comparison with the original disorder.

Finally, many cases of tetanus have been successfully treated by analogous means. This terrible malady, the most formidable of the complications with which surgical art has to deal, is due to acute inflammation of the spinal marrow. There ensues such a weakening of the motor nerves, that all the muscles of the body suffer a general contraction and a painful rigidity, which gradually attacks the most vital organs. When the disease reaches the muscles of the chest and the heart, death ensues by reason of asphyxia. But the continuous current tends to reëstablish in this emergency the normal condition of the motor nerves. Two other chronic diseases of the spine, the first of which, especially, is of a very severe character, progressive atrophy of the muscles and locomotive ataxy, will often yield to the rational employment of electricity, or at least, their natural issue being death, their progress is moderated. It is a notable circumstance that these two maladies were discovered and characterized by M. Duchenne (of Boulogne) in the course of his electro-therapeutic researches. Electricity served him, in this case, as a means of diagnosis, just as it serves as a means of study in physiology, where it represents, in some sort, a re-agent capable of disclosing functional differences which no other process could have revealed. This is in certain circumstances

the only means of deciding, according to the manner in which it affects a nerve or a muscle, upon the degree in which the power of this nerve or this muscle is impaired.

Aldini said that galvanism offers a powerful means of restoring the vitality by whatever cause suspended. Many physicians at the beginning of this century thus restored dogs, after having been drowned and taken from the water with every appearance of death. Hallé and Sue at this time proposed to have galvanic apparatus put in the different quarters of Paris, especially in the neighborhood of the Seine. This wise and useful proposal has never been carried out, although all the experiments since made have more and more demonstrated the efficacy of electricity as a remedy for asphyxia and syncope produced by water or by deleterious gases. The battery current restores also the respiratory movements in cases of poisoning by ether or chloroform, even when all hopes of resuscitation seem lost. Surgeons who are acquainted with this property of the galvanic current, remember it, when, as is the case in some diseases, the use of chloroform seems to them dangerous.

Electricity is very readily transformed into heat. When we subject a very short metallic wire to a powerful current, it becomes red-hot, and may even be reduced to vapor. Surgeons have availed themselves of this property in order to remove various morbid excrescences. They insert a metallic wire at the base of the tumors or the polypi which they wish to remove, and when this sort of electric knife has become incandescent under the influence of the battery current, it is pushed through the diseased part, which is thus separated by cauterization as nicely as with a cutting instrument. This mode of operation, which avoids the effusion of blood and causes but little pain, has been

attended with excellent results in the hands of MM. Marshall, Middeldorp, Sédillot and Amussat. Besides this application, where the heat especially is utilized, electricity has been employed to destroy tumors by a sort of chemical disorganization of their tissue. MM. Crusell, Ciniselli and Nélaton have made decisive experiments upon this subject. In fine, MM. Pétrequin, Broca and others have proposed to employ the same means to coagulate the blood in the interior of the aneurismal sacs. If this new surgery is not yet as wide-spread as it ought to be, it is because very great skill and practice are required in the management of electrical apparatus, and also because surgeons find it more convenient to use that standard instrument, the bistoury.

We have shown in this rapid historical sketch that electro-therapeutics is beneficial in a large number of diseases. Whether employed to modify the state of nutrition, to accelerate or retard the circulation in the smaller vessels, whether resorted to for the purpose of calming or exciting the nerves, of relaxing or stimulating the muscles, of searing or removing tumors, electricity, provided it be properly administered, is destined to render notable service to the curative art. The domain of thermo-therapeutics is less extensive: yet it has its own province. The exploration of what is reserved for the medicinal use of light, for phototherapy (if we may employ these neologisms), has scarcely begun. The same must be said of the use of gravity, which may be termed baro-therapeutics.* At all events, there is now forming, and the future will see

* M. Paul Bert communicated to the Academy of Sciences, in the sessions of the 3d and 10th of July, 1872, the results of long continued experiments which he has made concerning the influence which changes of pressure exert upon the phenomena of life.

more and more developed, by the side of the therapeutics of bodies, the therapeutics of forces, by the side of the medicine of drugs, the medicine of energies. It is impossible to say at present which of the two will definitively prevail; it may well be supposed that both are called to render services equally precious to the healing art.

The first savans who studied the action of galvanic electricity upon the bodies of dead animals, and saw them recover their mobility and even an apparent sensibility, thought to have found the secret of life; they likened to the animating force this other force, which seems to re-warm the already frigid organs, and to restore to the system its broken spring. No long reflection upon the facts brought together and set forth in the preceding pages is needed to perceive how great an illusion this was. Not only is electricity not the whole of life, but we can not even regard it as one of the elements of life, and liken it, for example, to the nervous force.

The experiments of M. Helmholtz, which have been described here,* have proved, to a demonstration, that such a comparison is contrary to reality. That which characterizes the forces of life and vital unity, and is the definite expression of their simultaneous operation in one and the same organism, is precisely the organization.

But electricity has no causal relation with one identical organization. This is the work of a superior activity, which appropriates all the natural forces, but connects and coördinates them, placing each in its special condition, to make them all subserve the purposes of life. The forces of gravitation, heat, light, electricity, are all maintained within living beings, only they are concealed under a new phenomenal unity, just as the

* See the *Revue* for August 1st, 1867.

oxygen, the hydrogen, the carbon, the azote, and the phosphorus, which constitute a nerve-cell, disappear in a new substantial unity without ceasing to exist as distinct chemical elements. The powers of inorganic nature are as necessary to life, as are lines and colors to the painter in making a picture. What would the picture be without the industry and the soul of the painter? The picture is his own work, the physico-chemical forces are the lines and colors of this homogeneous and harmonious composition which is life. They would have no significance, no efficacy there, if they did not there undergo, by the operation of a mysterious artist, a metamorphosis, which, raising them to a dignity that they did not before possess, gives them a place in the supreme harmony. Thus there is in the infinite solidarity of things, as Leibnitz thought, a continuous movement of the inferior towards the superior, a constant advance toward the good, an unceasing aspiration towards a more complete and more conscient existence, an eternal improvement.

VIOLENCE AND UNCONSCIOUS STATE OF EPILEPTICS, IN THEIR RELATIONS TO MEDICAL JURISPRUDENCE.

BY M. G. ECHEVERRIA, M. D.

Are the acts of violence committed by epileptics always the direct offspring of a paroxysm, or merely effects of the intellectual derangement induced by the disease? The great breadth of this question has already been acknowledged by the prominence attached to its elucidation by those especially devoted to the study of epilepsy, and whose valuable inquiries have thus far disclosed, that many extraordinary misdeeds, ascribed to crime, are originated by epilepsy. Delasiauve states; that, "one half of the homicides perpetrated by lunatics arise from no other cause, and that the trouble attending epilepsy is a prolific source of catastrophes." Maudsley declares no less positively that, "there can be no question in the minds of those who have studied mental diseases that certain unaccountable criminals belong to the class of epileptics. Lastly, J. B. Thomson, Resident-Surgeon to the General Prison for Scotland, at Perth, in a most valuable paper on the Hereditary Nature of Crime, concludes; that, "out of a prison population for ten years amounting to 6,273, or 627 per annum, the percentage of criminal epileptics under my charge was 0.94, or nearly one per cent. per annum, very different from the army and civil population of England, where the death-rate of epileptics is estimated at 0.009 per cent. only. There is, therefore,

a great excess of epilepsy among criminals."* The pernicious influence of epilepsy must therefore be very potent, though scouted by Courts of Justice. The possibility of homicide or other criminal actions cropping out of perverted affections, or a well-marked intellectual impairment, which irresistibly compels the epileptic to obey his morbid impulses, and destroys the judgment, for a proper recognition of his feelings and actions, through exaggerated passions and instincts, are equally declared by law of no account. Furthermore, the paroxysms of unconsciousness, or abstraction, differing altogether from the ordinary fits, during which acts of violence frequently occur, have been scarcely described by any author on epilepsy.

The subject under consideration ought to be examined in the connection of the epileptic seizures with the above intellectual disorders. Such an investigation covers broad grounds, rich in interesting themes, which have already been thoroughly developed by Delasiauve, Boileau de Castelnau, Falret, Morel, Troussseau, Legrand du Saulle, and other no less eminent alienists. I will not, therefore, go over fields where they have left little to be gathered, but confine my investigation within the circle of those cases, still obscure and perplexing, of hidden nocturnal epilepsy; or of fits occurring not in an antecedent but in a subsequent relation to the criminal act of violence; as also to cases where the morbid impulses are developed altogether detached from and independent of any visible fit, springing irresistibly into action out of the substratum of an unhealthy mind, and really denoting a state of *unconscious cerebration*, derived from a masked or cerebral fit, in which state most of the crimes calling for a medico-legal investigation are perpetrated by epileptics.

It may not be uninteresting to classify in a brief and

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general way the different forms of epileptic attacks before referring to any of the mental phenomena that might attend them. Delasiauve distinguishes four kinds of epileptic fits, to wit : 1. *Fits of absence*, or intellectual eclipse lasting but a few seconds, with paleness of the face and stupefaction as its signs. 2. *Vertigo*, or more or less prolonged obliteration of feeling, with partial convulsions of the face, or sometimes of the upper regions of the body. 3. *Intermediate attacks*, characterized by general shocks, extending with variable uniformity over the body, or exclusively seated on one side, lasting one or more minutes, and the fall, when it takes place, resulting from a loss of equilibrium. 4. *Grand attacks*, when, suffering a much fiercer storm, the individual is overthrown as if struck by an irresistible shock. The difference established by Delasiauve between the vertigo and the intermediate attacks is purely speculative, since it implies a distinction which does not exist; for both varieties actually differ in degree of the convulsions, and approach so closely to each other, that to nobody is it given to fix where vertigo ends, and the intermediate attack begins, nor to recognize them by the consequences which are analogous in either case. Calmeil, who was the first to show the true epileptic nature of the fit of absence, looks upon it as an averted attack of vertigo ; whereas Herpin asserts, that it is always possible to detect some slight partial convulsions in every case of absence, a fact which my experience fully corroborates. Herpin further contends, that intermediate attacks are never ushered in with complete unconsciousness, or with the initial cry. Delasiauve contradicts the statement, as I believe with good reason, because he has always detected absolute unconsciousness, though he has failed in several instances to observe the cry at the onset of the attack. I have

thus cursorily alluded to the disagreement between these high authorities, to show the impracticability of Delasiauve's division, which really offers no clinical or medico-legal advantage over the simple classification of epileptic fits I adopt, into *petit mal* and *grand mal*, or *falling sickness*. No species exist without varieties that mix and blend with each other, or with those from similar approximate classes. It is besides clear, that it does not follow as a matter of course that the distinctive conditions applicable to the varieties of one species are always so to the next; wherefore intermediate varieties are not classified separately, but among the species they resemble most in their principal traits or original characters. The *petit mal*, consequently, includes all fits of absence and vertigo, or those paroxysms where unconsciousness is the predominant feature, convulsions being almost absent, or an unimportant element. To the *grand mal* belong those attacks displaying unconsciousness and convulsions, with stertor and coma, in a greater or less degree. If any line of demarcation were to be made between the *petit mal* and *grand mal*, I should consider the statement of Marshall Hall perhaps nearer than any other to the truth, namely, that the presence of trachelismus converts the *petit mal* into *grand mal*.

Epilepsy may yet display itself under the larvated or masked form, described by Morel. One of his late internes at the Asylum of Saint Yon, Dr. P. Leblois, in his inaugural thesis "*Sur les rapports de l' epilepsie avec la Manie périodique*, Paris, 1862," gives very happily the name of *cerebral epilepsy* to the mental derangement here in question, conversely to the so-called spinal epilepsy of Brown-Séquard and other authors, to which it bears no relation further than the name. Sudden, transient, or prolonged outbursts of maniacal

excitement without any contemporaneous convulsions, are the main characteristics of *cerebral epilepsy*, supervening either as the forerunner or sequel of, or alternating periodically with either of the two other forms of epileptic paroxysms.

Finally another important variety is the nocturnal epilepsy, that seizes the patient in the night during his ordinary sleep. Such attacks, though of long standing, may often remain unsuspected by the patient, and not infrequently they also escape the notice of the physician. They ordinarily occur without inducing great agitation or muscular contraction, revealing their presence in the majority of instances, chiefly by the stertorous breathing, or the initial piercing cry sometimes uttered by the patient, who continues profoundly asleep after the paroxysm and wholly unconscious of his condition. The effects of these attacks are manifest in the morning, when the patient wakes up with a headache, confusion of ideas, dull eyes, pupils enlarged but not always equally dilated, and in some cases, with several petechiæ, or minute ecchymoses on the eye, forehead, face, or neck. In other instances the eyes are suffused and the face bloated, with the characteristic expression peculiar to epilepsy. Furthermore, not only are lacerations evident in one of the edges of the tongue, when this has been bitten during the fit, but stains of blood and saliva on the pillow or bed clothes will betray the occurrence of the attack. Other injuries may result from any unnatural position in which the limbs may be thrown during the fit, a fracture of the bones, or dislocation of the joints, being in this wise produced; whilst death may also supervene from suffocation of the patient by placing his head, during the fit, in a position that will impede respiration, as happened to a female epileptic

at the Hospital, who was discovered in the morning dead, lying on her face with her head buried through the opening of the tick in the straw of the mattress. The involuntary passage of urine or excrements, during the paroxysms, without the patient being conscious of it, has also a very great significance in establishing the presence of nocturnal epilepsy.

No difficulty attends the recognition of epilepsy when a paroxysm of *grand mal* has induced that of mania during which the criminal act of violence has been perpetrated. But, when the culprit is subject to nocturnal attacks, or simple *petit mal*, when the traces to the unpracticed eye are faint, to demonstrate the disturbing cause and bring the facts of the case to satisfactory computation, is a problem that can only be solved by a thorough acquaintance with the fundamental as well as with those apparently secondary conditions pathognomonic of epilepsy. Personal experience has shown me, that the larvated and nocturnal attacks, and the *petit mal*, disturb the nervous centers alike in structure and in function more rapidly than the fits of *grand mal*. Troussseau asserted, with great correctness, that all nocturnal accidents should suggest epilepsy. How easily the silent nocturnal paroxysms are overlooked, is as much illustrated by ordinary as by criminal cases. Their diagnosis, therefore, demands the nicest discrimination, for no kind of epilepsy is more liable than this to originate mental derangement, with impulsive criminal acts.

The following are examples of homicidal assaults and violence, after attacks of nocturnal epilepsy, which would have greatly perplexed, as to their true character, those unacquainted with the epileptic condition from which they sprung. It is needless to remark how much these acts, taken by themselves, would have embarrassed the question of the legal responsibility of

these epileptics, one of whom was almost providentially saved from the gallows.

CASE I. A printer, moderately temperate, enjoyed good health till July, 1864, when he received a blow on the head from a cog-wheel of a printing press. The blow fell upon the right parietal bone involving the suture, and to a slight extent, the left parietal bone, also leaving a linear cicatrix of the scalp, without injuring in any noticeable manner, the bone underneath. The accident rendered him insensible for about ten minutes, but did not prevent his resuming his work. For about four months afterwards he suffered from slight but frequent headache, which was aggravated by drink. His first fit occurred while at work, a few months after the injury. The night previous to the fit he had indulged more than usual in drinking. Three months later he had a second nocturnal fit, and thereafter the attacks occurred at intervals of about two months. They gradually became more frequent and he had one every two weeks until about nine months before his admission into the Hospital, (October, 1869,) when the attacks occurred less frequently, but always with their previous nocturnal character. The patient was of a quick, irritable temper. For two nights before the 30th of March, 1870, he was discovered by the watchman going slyly to tumble a helpless paralytic out of bed "for the sake of fun." On the 30th of March upon being quietly addressed by a harmless companion, the patient became furious, violently assaulted, struck several times at him, and severely injured his left eye. He remained entirely quiet after this unprovoked act of violence, and continued his work of setting the table for the other patients' breakfast. He offered no excuse for the assault he made on his companion, merely saying "that he could not help it, being provoked by his remarks."

CASE II. A sailor, aged 38, became epileptic after an injury to the skull by falling from the top of a mast. He was also troubled with polyuria. The fits displayed usually a nocturnal character, returning many times in succession in one night, followed during the day by a stupid condition, which changed after some hours into a talkative and incoherent state. One morning, after breakfast, on being casually spoken to by another patient, he rushed at him furiously, and seizing a knife near by would have stabbed him, but for the immediate interference of the attendants. It was noticed that he had had several fits the night before. This man, of a peaceful though moody disposition, was, on several other occasions, subject to sudden outbursts of fury, when he would attack any person near him. He felt very much distressed by these fits of madness, but obstinately concealed his dreadful feelings and hallucinations of hearing, and on this account avoided the society of his companions. He had, also, been committed several times to the workhouse for disorderly conduct.

CASE III. A gentleman, aged 34, has been subject from the age of twelve to nocturnal fits, always ushered in by an acute cry, as though he were harassed by a fearful nightmare. He has besides *petit mal*, and frequently becomes very melancholic, but the rest of the time exhibits a gentle inoffensive disposition. His maternal grandfather was insane, as were probably other members of his family. They are, however, very reluctant to afford any information on this point, and maintain the deepest secrecy regarding the suicide of a maternal uncle of the patient. One morning, three years ago, upon waking, after having experienced two paroxysms during the night, he went into his brother's room, and began to pace up and down very fast. Without speaking a word, he seized his brother's razor

and cut across his own throat, inflicting a serious wound. Had not his brother secured him the attempt at suicide would have been successful. On another more recent occasion, this epileptic, while at breakfast with his sister, when she asked him if he wished for some coffee, suddenly rushed at her. She saved herself by quickly calling for assistance. When the mother and brother entered the dining-room immediately after, they found him leaning on the back of an arm chair, very pale, grasping a knife in his right hand, but unconscious, in one of his paroxysms of *petit mal*. He had had a fit during the night.

CASE IV. I was consulted last December, by a gentleman from Metuchen, New Jersey, about one of his sons, thirteen years old. His maternal grandmother and uncle were, the one insane, the other epileptic. This boy had gradually become very ungovernable, being suddenly seized with fits of anger, in one of which he attacked with a rule another boy, and badly wounded him in the head. Strict discipline and correction have proved of no avail with him, his dangerous proclivities having forced the schools to refuse him admission. He displays a great ingenuity for drawing, of which he is very fond, but has acquired a very rudimentary knowledge of reading and writing. His singular disposition to destructive acts, or mischievous cruelty, changes with a remarkable rapidity into gentleness and quietness. He has often threatened to kill his parents or brothers, and attempted last summer to set fire to his father's house. The father adds, that he has the nightmare habitually, and is troubled with nocturnal incontinence of urine, particularly at the time of his ungovernable, mad turns. The boy exhibits no marks of lacerations of the tongue, but says that he feels dizzy in the day time; "that things wheel around him." His head looks

regular and well developed; the pupils are very large, and the extremities cold and purple. His intellect is of a low order; he is silly in his remarks, and given to mischief as soon as left alone. Another prominent trait of his character is, a proclivity to steal everything from his brothers or parents, as soon as the least opportunity offers itself.

I diagnosed nocturnal epilepsy, which was verified when the parents watched the boy more attentively. What was supposed to be a nightmare was a real nocturnal epileptic paroxysm. I advised, on account of the unpromising nature of his disease, that the boy should be placed in some institution for the insane, for as he would be likely to commit homicide or arson when in the above detailed condition of epileptic insanity, I deemed it very unsafe to allow him complete freedom.

CASE V. Years ago, a laborer in this city, named Macdonald, in the middle of the night killed his brother, who occupied the same bed with him. He grasped him by the neck until he strangled him, and as he could not account for his murder, it was consequently looked upon as a most wretched and flagrant crime. Macdonald remained, while in prison, utterly indifferent to his position, and would give no satisfactory history of his antecedents. The very night before the day fixed for his trial, he was at a late hour taken with an epileptic fit, during which, he violently seized by the neck another prisoner confined in his cell, and would have strangled him to death, had not the keeper come promptly to his assistance. Macdonald was in great fury at the time, beyond all control; the next morning he appeared as calm as usual, and had no knowledge whatever of the homicidal struggle in which he had been engaged a few hours before. The trial, of course,

had to be postponed after this event, and the late Dr. M. H. Ranney, of the City Lunatic Asylum, was directed by the Court to examine into the mental condition of Macdonald. As soon as the Doctor saw him, he recognized an epileptic he had discharged from the Asylum some months before, and who had been subject to nocturnal fits attended with homicidal mania. This interesting information has been furnished me by the lawyer who was appointed by the Court to defend Macdonald, whose fate would have probably been different without the occurrence of that nocturnal attack, inasmuch as his execution was loudly demanded by the press and public clamor.

On the subject of vertigo, or nocturnal epilepsy, and the judicial errors to which these doubtful cases lead, Dumesnil writes:

"I have treated a great many epileptics who exhibited their attacks at long intervals, experiencing thereafter an irresistible impulse to strike other persons, to steal, to commit arson, etc., etc., but who returned afterward to their usual state, without displaying any indication whatever, beyond their antecedents, to account for their evil inclinations. How easy it is to err in such instances if we solely judge from present actions without resting on any other safer data?"

"A young epileptic, who had committed several thefts was recently transferred from the prison of Bicêtre to Quatre-Mares: he managed to escape thirty-six hours after admission, when he seemed hardly recovered from a fit, and was arrested the very next day near Louviers for burglary. Nothing, in the answers of this man betrayed the disease in question. However, the imperial attorney, without discontinuing proceedings, kept him under close guard, and when the information was received from the Prefecture, he immediately became convinced of the frequency of the fits, their attending intellectual derangement, and the complete mental recovery intervening between them, wherefore the return of the patient to the asylum was at once ordered."

"There are other cases still more perplexing, namely, those in which the convulsive accident is only reduced to a slight vertigo,

that may for a long time pass unnoticed, although nevertheless attended by the most strange and dangerous morbid incitations. I possess some very curious observations of this kind, on which point there is a lack of scientific documents."

"A soldier subject to more or less frequent outbursts of passion, was brought before a court martial on a charge of having gravely insulted his superior officer. A medical investigation was instituted, and thereupon the arraigned soldier was transferred to an insane hospital, where it was ascertained that he was subject to mild attacks of periodical mania. Long afterwards I had occasion to satisfy myself that each one of these attacks was preceded during the night by a light nervous fit. This condition had passed ignored by the patient himself, by those who for several years had slept every night close to him, and by those who attended him."

"At the present time three of my patients at Quatre-Mares have only been considered epileptics for eighteen months, after having spent several years at Saint Yon and the new asylum, without this dreadful complication having been suspected. These insane patients are the most dangerous, their fury breaks out suddenly and is directed almost always against some person, most frequently terminating in the quickest manner, and recurring at such distant intervals that one might think it a complete recovery after a simple fit of mania."

"I would take pains to affirm that there is now no patient at the Institution under my direction, whose insanity is not intimately associated with slight nocturnal attacks, which up to the present have escaped our attention, and may become recognized at any moment after a stronger attack, or a fit of vertigo in the day time, as it happened with the patients just alluded to."

"A man arraigned for larceny, and recently admitted into Quatre-Mares, whose physiognomy had struck me, and whose delirium exhibited very similar characteristics, was discovered a few days ago, as having epileptic fits during his sleep. At present this man evinces no signs of insanity, and does not recollect the larceny he committed, or the circumstances connected with it."*

The high authority of Dumesnil in psychological medicine, and the great medico-legal value of his observations, are chiefly my reasons for coupling them with the preceding in a group. I have thought neces-

* *Les aliénés et les enquêtes médico-légales*.—*Journal de Médecine*. Tome I., 1861; pp. 255, 256.

sary to supply a deficiency of well-authenticated and precise facts to bring truth to light concerning the criminal responsibility of epileptics, who, through judicial prejudices, or error on these obscure points, have been held accountable for their actions, and too often, condemned without mercy.

I will make besides, brief reference to another case cited by Morel: A young man condemned to five years' imprisonment by a Court of Assizes, for having, without provocation, inflicted a nearly fatal blow on one of his best friends, was subject to epileptic fits during his sleep. Morel had the opportunity of verifying the fact at the prison where this young man was incarcerated. This unfortunate sprung from a family among whose ancestors were epileptics, lunatics, and others who died of cerebral hemorrhage. He had no distinct recollection of the act for which he had been tried, nor did he show the least grief; and such an apparent insensibility, the result of his disease, helped in no small degree to condemn him. Morel further remarks, that, on repeated occasions, this young man had struck his friends, without provocation, and that he exhibited dullness and hypochondria.*

The involuntary passage of urine has already been pointed out as one of the signs of nocturnal epilepsy, and I have noticed one instance in which it led me to discover the unrecognized attacks. The importance that may attach to this symptom, and the singular intellectual perversions that may be induced by epilepsy, are vividly illustrated in a recent extraordinary criminal case, submitted to Legrand du Saulle for examination and report, and by him presented to the consideration of the Medico-Psychological Society of Paris, on the 29th of January, 1872. The case is, indeed, excep-

* *Traité des Maladies Mentales*: Paris, 1860; p. 695.

tional in every respect, and I give the leading points of its history, as worthy of attentive study.

CASE VI. A young man, belonging to a distinguished family, was at the age of 18, regarded as "a queer fellow," without memory, and occasionally liable to fits of unprovoked anger and violence. At 19, while in college he had, as he says, brain fever, which for two or three days rendered him so delirious that he had to be restrained. From this attack he recovered suddenly. He at this age unconsciously wet his bed during his sleep, five or six times in a year. He entered the Military School of Saint Cyr, studied well, and was of good deportment, though he always suffered from what he called "weakness of the bladder." After two years of study, he was appointed under-lieutenant in the African army. There he became difficult to please, quarrelsome, insolent, pettish, addicted to drinking absinthe, and at times uncontrollable. He was punished by his colonel, and having fought a duel, had on this account to abandon his regiment, and joined one of *turcos*, among whom he was no less disagreeably situated. He suffered at this period so much from nocturnal incontinence of urine that he had to pay for the consequent damage to his bed. During a long march through the province of Constantine, he fainted, was carried to the hospital, and there treated as affected with sunstroke. When recovered, he rejoined the *turcos* regiment, but caused so much trouble that he incurred a severe punishment from his general, after which he tendered his resignation, and without taking leave of anybody, returned home in June, 1870. He, however, felt ashamed at his resignation, when the war broke out with Germany, and dreading to be branded as a coward, enlisted as a private, and fought in several engagements before Metz; was taken prisoner,

but succeeded in making his escape from the church at Pont-à-Mouson, where he had been confined with some other soldiers. He reached his home after severe hardships, and noticing that new armies were being recruited to meet the exigencies of the war, he wrote to Gambetta that he had been promoted to the rank of lieutenant and decorated a Knight of the Legion of Honor while before Metz, and begged for a command becoming his rank. Gambetta sent him a lieutenant's commission and orders detaching him to the Loire. He had his left shoulder crashed by a ball, at the battle of Coulmiers, and, being picked up by an ambulance, was thereafter treated in different places, but did not fully recover from his wounds. His real position, in the meantime, became known to the military authorities, who had him arraigned before a court martial: 1, for desertion in presence of the enemy, when escaping from the church at Pont-à-Mouson, without at once joining his regiment; 2, for making the false pretense of having been promoted lieutenant before Metz; and 3, for claiming he had been decorated a Knight of the Legion of Honor.

On examining this young man at the military prison, Legrand du Saulle found him calm, gentle, intelligent, pale and of a sickly appearance; but otherwise sincere, confident and resigned, though earnestly protesting against the imputation of cowardice or insanity. The eminent French alienist declares, that he attaches such a weighty symptomatic value to the nocturnal incontinence of urine, that, under the circumstances, irrespective even of the psychical peculiarities displayed throughout the agitated and harassed life of the prisoner, he should affirm the existence of epilepsy, even if the supposed brain fever at the college, the attack of sunstroke in Constantine, and the other details already

noticed, were not clustered around the case so as to leave no room for doubt on the subject. The difficulty, however, rests in another direction, and Legrand du Saulle thus alludes to it:

"Listen to what the Judge delegate of the court martial may say: I was ignorant that weakness of the bladder was a betraying sign of epilepsy, as I was equally ignorant that epilepsy could authorize a soldier improperly to wear the straps of lieutenant and the decoration of the Legion of Honor; but you state that such a thing is possible, and I believe your word. Yet, how does it happen that free from fits C—— has persisted in wearing the straps and decorations, which ought constantly to have called to his mind an unconscious fallacy, a pathological error or crime on his part, and the excessive confidence of M. Gambetta in a French officer's word? I contend the physician will reply, that C—— labors under a neurosis, which transiently disturbs the intelligence. I believe that the letter to M. Gambetta might have been written in one of such deranged moments; but it is not in my province to appreciate the consequences of acts that occurred outside of a state of delirium. The trial starts from an acquired irresponsibility, but fatally leads to a series of free and fraudulent acts. I acknowledge and deplore it. As a physician, I recognize and pass judgment on the starting point; but as a man, I leave the judgment of the point of termination to the wisdom of the Court."

In this dramatic instance, epilepsy had existed unheeded for almost fourteen years, the nocturnal incontinence of urine being the symptom which drew Legrand du Saulle's attention, and caused him to recognize the singular and mysterious nature of the criminal actions, specified in the charges against the prisoner. To satisfy the Society that he had not overestimated the value of this symptom, Legrand du Saulle referred to other cases under his own observation, and reminded it of the important significance which Rousseau always gave to this phenomenon, that by itself had often enabled the great physician of the Hotel-Dieu to diagnosticate epilepsy.

The foregoing cases, excepting Macdonald's, and the first quoted from Dumesnil, evince impulsive acts of violence, some of them of a homicidal nature, in epileptics who were apparently in a rational condition, though laboring under the unrecognized influence of a previous nocturnal attack.

I can not pass over two circumstances therein mentioned, that I have met as prominent factors of epileptic insanity, namely: the hereditary predisposition to the disease, and injuries to the head. It is unnecessary to add, that when intemperance unites itself to either of these elements, it increases their potency and contributes most effectually to induce severe mania, or sudden fury. Two of the most violent epileptics I have seen, became such after fracture of the skull, and their fits were always excessively aggravated by drinking. The paroxysms of fury which one of them displayed for one or two days after the fits, were of a very extraordinary and dangerous character: both exhibited during this state alternations of calm and apparent rationality, though neither of them preserved any recollection of what they did or said at this time.

The combined influence of hereditary taint, traumatic injury to the head, and intemperance is strikingly illustrated in the following case.

CASE VII. A carriage driver, whose grandfather was insane and whose mother was phthisical, became affected with epileptic vertigo and violent mania, from severe contusion to the head by being thrown from a carriage, against a lamp-post in the Central Park. No cicatrix existed at the site of injury over the postero-superior angle of the left parietal bone, but the scalp and bone underneath were very sensitive to pressure. I trephined the skull and removed a portion of the bone, which was thick and hardened by inflammation.

The maniacal excitement gradually disappeared thereafter, and he left the hospital, entirely recovered of his insanity, about four months after his admission. Having resumed his occupation and irregular habits of drinking, he died, five months later, with peri-encephalitis. This epileptic came very near killing one of his attendants, who was kindly dressing his wound a few days after the operation. The attack broke out suddenly, without the attendant speaking a word, just as he began to loosen the bandage around the head. After the impulsive fit of furor, the patient acknowledged that he was aware of doing wrong, but that it was more than he could do to help it, and that he had to give himself up to such an act of violence, "to quiet his nerves."

The readiness with which the most indifferent remark, or even the gentlest touch, may occasionally become an inciting cause of epileptic fury, has not escaped Delasiauve's attention, who prominently sets forth this apparently trifling circumstance that may nevertheless prove of so much legal moment. One of Delasiauve's patients rushed fiercely, and brutally struck at one of his companions, who had done nothing but ask for a place on the bench where he was sitting. Another burst into extreme fury upon being asked for the light of his pipe. I shall have occasion to refer to other instances, besides these I have already cited, of attacks of overwhelming fury, acknowledging such motiveless incitations as their immediate cause, and could swell the list with several more examples under my own observation.

The best safeguard, and one eminently worthy both of medical and legal attention, for a correct appreciation of the epileptic seizures, are the phenomena that immediately precede or follow them. It is a peculiarity of

the epileptic paroxysm, that its premonitory symptoms, or rather its incubation, are ordinarily hidden and imperceptible, not offering the least warning to the patient, and unrecognized even by careful watchers. In many instances, however, an aura, distinctly perceived, admonishes the patient for a few seconds or a longer time, of the approaching fit. Physiological experiments demonstrate the truth of the principle proclaimed by Marshall Hall, that epileptic paroxysms, like all reflex actions, must always be due to peripheral incitations. With an unequaled skill and sagacity, Brown Séguard has shown the existence of the unfelt aura, and the fact that irritation of certain peripheral nerves arrests, or prevents the attacks in artificial epilepsy. A further step has been achieved, in the experiments of Herzen and Lewison, evincing, that so long as irritation of the peripheral nerves lasts, no reflex excitability of the spinal cord can be brought into action. I shall not expatiate on these fundamental principles, which I briefly point out, as giving us the key to explain the sudden generation of violent impulses in an apparently quiet patient, upon the least moral or physical excitation, as well as the other singular phenomena of epileptic insanity. And, whether the aura acknowledges a peripheral origin, as physiological and pathological researches indicate, or whether it merely represents a mental accident, a delusional sensation, as believed by some authors, no point rests better settled in my mind than, that the aura, either felt or unfelt, is the harbinger of the attack, susceptible, as established by Troussseau, and as I have repeatedly seen, of entirely constituting it in vertiginous epilepsy, or in the sudden outbursts of fury supplanting the epileptic paroxysm.

The epileptic aura varies in nature and may involve the intellectual, sensorial or motorial faculties, or ex-

clusively the vascular and secreting systems. Without stopping to delineate each of these varieties, with which we are so familiar, I will give place here only to the characteristics of the mental aura, scarcely described by any author. Falret writes:

"Just as different bodily derangements may precede the epilepsy by a few minutes or a few hours, for example several kinds of indispositions, headache, vomiting, pains of various sorts, or else the sensory or muscular symptoms to which the generic term of *epileptic aura* has been applied; so also the convulsive attacks of epilepsy may be preceded either immediately or at a greater or less distance, by different disorders of mind or temper. Thus, it happens, that certain epileptics become sad, pevish, irritable, quarrelsome, often for several hours before their fits. Others again, complain of slowness of conception, failure of memory, obtuseness of ideas, or a kind of hebetude or physical and moral prostration, which to those used to their society, or to themselves, are sure presages of an approaching fit. Others, lastly, display for several hours before the epileptic attack an unusual gaiety, an exaggerated sense of physical and moral well being, an unbounded confidence in their strength, and sometimes even a state of restlessness and loquacity which may be pushed on to maniacal excitement, or to violent outbursts of passion. Apart from these precursory symptoms, which may come on at a variable time previous to an epileptic seizure, there are other more immediate intellectual prodromata, a sort of *intellectual aura*, which only precedes the convulsive paroxysm by a few minutes and constitutes in a certain measure the first symptom thereof. We see, for example, some epileptics in whom the same idea, the same recollection, or the same hallucination springs up spontaneously at the moment of the invasion of each fit and infallibly precedes its appearance. The patient sees flames, fiery circles, red or purple objects, a ghost or a phantom, he hears the sound of bells, or a determined voice uttering always the same word, or lastly, he sometimes perceives the smell of a particular substance. These ideas and recollections, or these false sensations which are excessively variable as to individuals, ordinarily reproduce themselves with singular uniformity in the same individual at each new attack. It is further a curious fact, that very often this recollection, this idea, or this image, is the reproduction of an idea or a sensation which provoked the first fit in the

patient. Many, in fact, who have become epileptic after strong mental emotion, or intense terror, behold again in spirit, or before their eyes, on each succeeding seizure the painful or the dreadful scene which first produced their complaint."**

I have availed myself of Falret's description, because it would be impossible to render a more precise and vigorous account of the intellectual aura than the one he has traced with such masterly strokes. The psychical phenomena peculiar to it, although not of constant occurrence, deserve the most attentive consideration, since their sudden supervention may render epileptics, not otherwise insane, extremely dangerous and liable to commit suicide, or murderous acts of violence for which they could not be held responsible, as evinced by the following example:

CASE VIII. A gentleman, subject to fits of *grand mal* every five or six weeks, manifests, for a day or two before, the most extraordinary ill-temper and sensitiveness, with a sad expression of countenance, and assaults or insults the by-standers without provocation. These propensities and periods of unnatural excitement are displayed before, but never after the paroxysm, and as this breaks out, he always sees, with the left eye, a hideous black and red human figure, which slowly magnifies as it approaches him. His head perspires profusely after the attacks, and no perceptible difference has been detected with the ophthalmoscope between the right and left optic nerves. This patient, during one of these premonitory stages, assaulted his attendant with a chair, and gave him a blow on the head, which left him senseless, because the attendant asked him how he was feeling. Then he ran to his sister in a frantic condition told her he had killed the attendant, and dropped in a fit. This epileptic is perfectly rational at other times, when he can render a circumstantial account of his dis-

**Etat Mental des Epileptiques* : Paris, 1861, pp. 5-7.

tressing feelings. During the temporary disorder of action preceding the fits, his eyes and cheeks become flushed, and he has to be kept in seclusion.

Falret, Troussseau, Delasiauve, Boileau de Castelnau, and others, have reported curious instances of intellectual aura, too well-known to need repeating.

Let me, however, briefly recall the singular case I have before detailed, of a demented epileptic, who, for a day or two previous to his nocturnal attacks, displays a remarkable intellectual brightness, with recollection of events that happened long before; but the sparks of lucidity go out with the onset of the attack. During this time he becomes very irritable, mischievous, and subject to violent impulses. This epileptic, who has been such since infancy, presents a well marked microcephalic type, is besides a monorchid, and could not afford a more striking illustration of physical and mental degeneracy, since several of his paternal and maternal ancestors are epileptics or paralytics.

In some instances it is not the accession of the fit which brings back to the mind its originating, painful or frightful cause, but the reverse takes place, the unexpected recollection of the emotion superinducing the attack. Van Swieten reports two such cases: one that of a child who became epileptic upon being frightened by a dog, and who would be afterwards thrown into a fit whenever he heard a dog bark. In the other instance, the fit recurred whenever the patient recalled to mind a frightful impression which caused the first attack. Maisonneuve saw a boy seized with paroxysms, whenever he remembered the dreadful stories about ghosts with which he had been scared in his infancy. A girl, under my care, was, while menstruating, completely overcome by fright at a fire in her bedroom, and suffered in consequence a great nervous

disturbance with convulsions, which soon recurred with a distinctly epileptic character, and have been very often superinduced on hearing the bells ring a fire alarm.

The intellectual aura not only annoys and distresses the patient, but also raises the most terrible impressions, often irresistibly leading to impulsive actions which are indeed the chief source of the unaccountably sudden change in feelings and the automatic acts of violence preceding the attacks. Not infrequently the paroxysm does not break out in full force, and then it is represented by the intellectual aura, or the morbid impulse is developed as its exponent. I have ascertained that delusions and hallucinations are ordinarily concealed by epileptics, and that they only describe them when pressed on the subject, or driven unawares to speak about them. The statistics I have kept of 267 cases of manifest epileptic insanity, show that morbid sensorial phenomena of various kinds have existed in 86 per cent. of the cases. Hallucinations of hearing are recorded in 62 per cent.; of sight in 53 per cent.; of hearing and sight in 42 per cent.; and of smell in 6 per cent. Finally, about 30 per cent. of the cases have displayed disturbance of general sensibility, (anæsthesia, hyperæsthesia, numbness, etc., etc.) If we take into consideration the frequency of these false sensations in epileptic insanity, it will not be difficult to realize the manner in which its victims are fascinated by the feelings they experience, and which ordinarily assume the most frightful or deceitful character. The eminent Brierre de Boismont, than whom no more competent authority could be presented on the subject of delusions and hallucinations, disapproves of the manner in which those who have discussed the legal responsibility of epileptics, have completely thrown aside the relations between hallucination

and epilepsy, in the epileptic shock which only affects the will. He reports several observations in support of the frequency of hallucinations with epilepsy, and says:

"Sometimes the fantastic figures address the epileptic in words, they insult him or command him to do something. It is probable that many crimes committed by these unfortunate beings, and for which some have been severely punished, were but the result of hallucinations of hearing and of sight." * * "These hallucinations are generally of an alarming and sinister nature." * * "A countryman told us that in an access which preceded his admission to my house, whilst working in the field he seized a scythe and commenced cutting everything before him, incited by a voice which bid him to do so. After having traversed a great extent of arable land, he stopped, worn out by fatigue, near a well, and there fell asleep. If he had happened to meet with any living creatures, what misfortunes might there not have been to deplore? Esquirol, who had remarked the extreme terror caused to epileptics by their hallucinations, asked if it might not be this feeling which impressed on their physiognomy the character of fright or indignation which belongs to these patients during the access. Hallucination and illusion ought to be taken into consideration with reference to the instinctive and sudden acts of epileptics."*

One of my patients in his nocturnal attacks, sees a man in the corner of his room, and begins to cry in great terror and distress. Another hears a voice abusing him, and assaults the bystanders. Another can tell for an hour or two before going into a fit, by a peculiar lameness and dreadful pain in the legs, extending to the groin, and hearing at the same time the ringing of distant bells, which recedes as the fit approaches; at these times his feelings become very distressing, and he remains in a bewildered state. Another patient, again, while the attack is pending, feels distressed by a most offensive smell, with great fear, and a propensity to bite those near him. A woman, hears for three or four

* Hallucinations in their relation to Medical Jurisprudence. *Medical Critic and Psychological Journal*: Vol. II, 1862; p. 78.

hours before her fits, a constant piercing cry, like that of a child, which harasses her to such an extent, that she can not be approached without answering in a violent manner. The epileptic who killed Dr. Geoffrey, of the Avignon Asylum, heard, several days before the murder, a voice which said to him, "Kill the doctor, if you don't, you'll be unlucky."

One of the epileptics among the cases reported by Dr. John P. Gray, in his valuable memoir "On Homicide in Insanity;" "anticipated his seizures, and requested to be placed in his room and to have no one approach him suddenly. He experienced at this time pain in the head, a sensation of ringing in his ears, dimness of vision, with a vague idea of impending danger. His violence was occasioned by the delusion that persons were attacking him with the intention of killing him; and on several occasions, while alone in his room, he had a distinct sensation of a blow upon the head, when he would immediately begin a furious contest with imaginary enemies."*

I am not, however, prepared to go to the length of looking upon all the psychical phenomena and impulsive actions manifested by epilepsy, as evincing a mental aura, or a false sensorial perception; because they may proceed also from the shock, that mainly affects the will, superinduced by the disease; and, the shades and modifications of which, true insanity have not as yet precisely established. Nor does the existence of a mental aura favor or aggravate the predisposition to epileptic insanity. Boileau de Castelnau has said, that epilepsy deprives its victim of estimating the reach, or appreciating the motive, or controlling the exaggeration of its animosity. Delasiauve no less forcibly asserts, that epileptic susceptibility not only helps evil instincts, but may by itself give rise to them, and by

* *American Journal of Insanity*, Vol. XIV., 1857, p. 127.

raising and inspiring the idea of a misdeed, may drive fatally to its accomplishment. I have on many sad occasions seen the statements of the eminent authorities just cited corroborated. I am satisfied that the passions and appetites of the epileptic may be roused through his morbid susceptibility to an unaccountable degree, either before or after, or contemporaneously with the attack. But the phenomenon may be effected by the same natural agencies that would ordinarily operate on a healthy mind, while no attack is brooding; and the feelings in this wise excited, may act in their turn like any violent emotion, and originate an epileptic fit. Such an extreme irritability and violence to react, with its accompanying impulsive actions, constitute a train of phenomena which are only observable within the sphere of action of the epileptic malady in its progress. I have never noticed them when the epileptic appeared in a state of convalescence or recovery, nor when the attacks were of rare occurrence, without any effect on the mind. That this shock to the will, or unnatural reflex excitability of the nervous system attending epilepsy, may determine efficiently the extreme exaggeration of passions and emotions, which culminate in an epileptic paroxysm, is a fact apparent from several cases of my own and other alienists, although they were not reported by them to illustrate this point.

CASE IX. A girl, aged 18, suddenly turns very pale, with eyes wide open, staring in front of her; she drops the head repeating several times, "mother, mother," and recovers consciousness in one or two seconds. She is troubled besides, with convulsive fits, and when the *petit mal* occurs frequently in a day, it renders her very destructive, and also foul in her language. She has assaulted and threatened to kill her mother during such periods. This girl felt a resentment against

one of her aunts, who objected to her going to places of amusement. On this account she could not bear her presence without giving vent to her animosity in the most bitter reproaches and insults, until a convulsive fit broke out. The fact recurred so regularly under these circumstances, when no indication of a fit existed, and the efforts of the family to remove the unjust feeling, proved so powerless, that it was necessary to prevent the interviews between the aunt and niece.

CASE X. A Catholic gentleman, aged 36, epileptic since childhood, and having two paternal uncles insane, suffers from *grand mal*, attended with religious monomania for a few days after. He manifests in these attacks a great desire to go to church, where he remains several hours in devout prayer. These desires, for obvious reasons, were in the beginning opposed by his family, and this greatly heightened his excitement and anger, inducing every time an epileptic paroxysm. To try the experiment, he was once allowed to go to church accompanied by his servant, and no ill effects or fit ensued. It is needless to allude to the miraculous influence attributed to prayers and pious devotion, in averting fits which were the outgrowth of excessive anger and mortification.

CASE XI. A boy, eight years old, has been, since infancy affected with left hemiplegia, and frequent instantaneous attacks of jerking which throw out the limbs, in addition to fits of *grand mal*. Paralysis is regarded as a hereditary disease in the mother's family. This boy exhibits a most irritable and angry disposition, and when his wishes are not promptly gratified, or he is corrected by his parents, he falls into a rage which is soon succeeded by an epileptic fit. Treatment has greatly improved his mental condition without completely arresting the epileptic paroxysm.

CASE XII. Two years ago, I was consulted in the case of a boy sixteen years old, who had nocturnal epilepsy, induced, as his father believed, by masturbation, though no proof existed to that effect. A physician had asserted that masturbation was always the cause of this kind of epilepsy, and on this assurance the father endeavored to obtain a confession from the boy, who denied the accusation, though he acknowledged that he had heard other boys at school speak about such a bad habit. This examination, made one Sunday morning, wounded the boy's feelings so deeply that he did not breakfast, but remaining in his room taciturn and sullen, had the first diurnal paroxysm. This sad result carried to the father's mind the conviction that he had detected the real cause of the disease. From that day, whenever the boy has been questioned on this point, by his father or any physician, as I have had occasion to witness, his resentment becomes so extreme, that he refuses talking any more, and falls soon after in an epileptic fit. He has entreated his father not to mortify him by investigations of this character, and has even threatened to commit suicide if his wishes were not complied with. No other cause has ever induced, in this case, a diurnal attack.

The following interesting example is mentioned by Boileau de Castelnau:*

CASE XIII. "Dr. Valériand was, in March, 1830, directed by the Attorney-General of Paris to examine C———indicted for having inflicted wounds on another man which proved fatal; the existence of epilepsy was verified, and, in addition, that C———would be thrown into epileptic convulsions by the least contrariety and that the slightest moral emotion would induce them. Dr. Valériand, consequently, declared that

* *De l' epilepsie dans ses rapports avec l' alienation mentale*, Paris, 1852 : p. 34.

C—— could not be tried, as he was in a state bordering on dementia, in which he will probably end. The Doctor further advised that C—— should be transferred to the division of epileptics in Bicêtre."

Two more remarkable instances are cited by Devergie, who obtained the details of them from Moreau de Tours, under whose charge the patients were.*

CASE XIV. "In 1841, Moreau de Tours, had under his care at Bicêtre, a young man from twenty-five to twenty-six, who had been condemned to death for murder, but whose sentence had been commuted to twenty years' imprisonment. He was epileptic from infancy, and had received an accomplished education. He came to Paris with a young woman whom he expected to marry, and whom he loved extremely; but becoming jealous of her harmless flirtations, quarrels arose. One evening, after a long promenade X—— who for two days had been feeling unwell and giddy, came into the hotel and found his mistress sound asleep. Suddenly he thought how unfortunate he would be if this young girl should prove false to him, and taking a pistol killed her. He immediately fell in an epileptic paroxysm and was found struggling in convulsions by the persons who hastened to the room."

CASE XV. "A young man, aged 22, had suffered for five years from attacks called, by the physicians, epileptic fits. 'I am unwell,' said he to Moreau de Tours, 'every five or six weeks, having sometimes several attacks in one day. I had never noticed that this malady impaired my health until I was seized a month ago with fears of becoming insane on the following account. I had a trifling disagreement with one of my friends, and two days after, having awoke all confused, the idea of this quarrel returned to my mind, and its recollection

* *Bulletin de l' Académie de Médecine*, Vol. XXVI, 1861: p. 436.

excited me to such an extreme, that I conceived a feeling of hatred and revenge. Thereupon, I rushed for a dagger, put it in my pocket and hastened to my friend's lodgings, with the intention of murdering him. Fortunately, I had scarcely pulled the door bell, when I dropped down in one of the fiercest paroxysms I ever had, my very friend being the first to come to my assistance.'"

Devergie concludes from these two interesting cases, that it is never during the seizure, but in the interparoxysmal intervals, that criminal ideas are conceived by epileptics, and always in cases of confirmed epilepsy. Most assuredly, it is in confirmed epilepsy that these psychical phenomena generally spring up; but the forcible illustrations chosen by Devergie, obviously demonstrate that the mental disorder, the irresistible impulse, may also immediately precede the epileptic seizure, forming a part of it. These examples exhibit the excessive irritability that foretells the paroxysm. In either case, however, the single isolated occurrence of the phenomenon, its origin and nature, precludes the idea of regarding it as an intellectual aura in the sense properly applied to this term.

My own cases, nevertheless, leave no room for doubt as to the manner in which a feeling or passion, which has received no previous uncurbed indulgence, and like that which may be suddenly aroused in a sound mind, may be heightened, by the unhealthy susceptibility of epileptics, to such a degree as to culminate in the onset of a paroxysm not otherwise induced. Those in immediate charge of epileptics have an almost daily opportunity of verifying this fact; and the records of psychological medicine afford a great many more proofs of the state of mind under consideration than those I have already mentioned. I referred, when considering the criminal responsibility of epileptics, as illustrated by

the case of David Montgomery, to the example detailed by Boileau de Castelnau of a convict, in the prison of Nismes, who had an epileptic fit after quarreling with a companion, whom he afterwards stabbed and came near killing, for having made jest of his attack. It does not seem to me improbable, in the case of Montgomery, that jealousy might have exerted not only the most evil influences in his mind that he would fain avoid, but also the most energetic to induce the epileptic fit, which seemed to have occurred about the moment of the crime, as betrayed by the partially dressed and bewildered condition in which Montgomery, with a razor in his hand, ran out of his house to the neighboring barn, after slaying his wife. I can not avoid recalling one last example of this state of mind, cited by Dejaeghire, in which are also fitly set forth many typical signs of epileptic insanity, while remaining as an eloquent record of the punishment of a madman, not only unjust but harmful.

CASE XVI. Rœgiers, aged 30, of strong constitution, is the son of healthy parents. When seven years old, he was seized, upon a sudden fright, with an epileptic attack, which was soon followed by a second and third until the fits recurred with a very fearful frequency, increasing every time in intensity and duration and lastly degenerating into a true rage. Everybody dreaded him, and woe to him who should oppose the execution of his will, when he was laboring under the forerunning uneasiness of an attack. Once this epileptic fury passed, the patient loses the memory of whatever has occurred, and regains his normal state of a calm and peaceful though extremely irritable man.

The fits of Rœgiers recur particularly during the night, announced by the following signs: his face becomes animated and of a purple red; his eyes brighten

and seem to come out of their sockets; his sight is soon rendered dim and all appears in confusion around him; the head feels very heavy and aches, the veins of the neck grow large, and until the moment in which the fit reaches its height and throws him into a complete insensibility, he struggles furiously, and if unrestrained, gives himself up to every kind of dangerous act.

Rœgiers had a fight with a man named B—. Judged upon the point in controversy by the Court of Courtrai, he was condemned to a few months' imprisonment. Rœgiers protested his innocence as to the charge brought against him. Furthermore, on leaving the Court, he shook hands with B—, assuring him that he entertained no grudge against him, since he could not be held accountable for the wrong decision of the Court. However, it is this very man B— whom he after intends to kill, and to this effect Rœgiers was seen on the day of the murder, steadily sharpening his knife for several hours on a grind-stone, and repeating incessantly, "I shall know how to have you." He then goes out in broad daylight, holding his knife, runs to B—, who lives in a very populous ward, and enters his house with assurance. But B—, on seeing Rœgiers coming with a knife, escapes through a back door. Rœgiers chases him, stabs B—'s sister, who endeavored to defend him, and finally overtakes him and rushes upon his victim like a tiger. He inflicts upon him a deep wound in the neck and plunges his nails in it to enlarge it. A great crowd hastened to the spot, but the most daring were afraid of going to the rescue of the unfortunate B—. It was not until Rœgiers fell down that they took hold of him, and bound him with cords to a wheel-barrow. To every question put to him by the Court of Assizes, and in reply to any details concerning his horrible crime, Rœgiers gives always

the same answer: "Since you make me aware of it, sir, I must needs believe it, but I completely ignore it."

"The first physician examined on the mental state of Rœgiers, declared that he enjoyed full possession of his reason. Rœgiers was condemned to death, but the sentence was commuted to penal servitude for life and the exposing for one hour. While suffering this last punishment, he was seized with such violent convulsions, that the executioner was obliged to place him in a chair, where he had the greatest difficulty to secure him."*

The proofs of the propensities and wild instincts that may arise out of the state of epilepsy are, therefore, too precise to be any longer disregarded; whereas the cases here noticed and many similar ones that might be added to their number, confirm how insufficient, motive, premeditation, and design are, to supply trustworthy evidence on which to rest the recognition of culpability in relation to the insane. Enough facts have been set forth to make manifest, that, whatever might be the apparent guilt coloring their actions, epileptics are irresponsible agents when laboring under the perverted mental condition we have been considering. This state of epileptic insanity, which so deeply and greatly affects the volitional acts, can not be measured by common sense, which, as Maudsley says with great propriety, in a matter of science, represents common prejudice or ignorance, and can not be applicable, as a standard of measurement to that, the essence of which is, that it is not common sense, but insanity. I have no wish to disparage judicial opinions and discussions, but I can not refrain from agreeing with the English alienist just named when he says:

"That the law representatives have deemed it sufficient for all possible cases, and have thought themselves excellently well employed while they were putting new wine into old bottles; they

**Annales Médicales Belges*, 1843, quoted in *La Folie devant les tribunaux par Legrand du Saulle*: Paris, 1864; pp. 422-424.

would search in a statute of Elizabeth for regulations applicable to a steam engine or a balloon, and would insist that science can not reveal anything which the law has not contemplated. When we see the Judge, whose wisdom, age and office might well attest, thus irritably engaged in laboring to make the old garment cover the new fact, the reflection can not but occur, that it is well for truth that man is mortal.”*

In one of the previous cases, attacks of sudden jerking of the limbs have been noticed, and I will briefly point out the importance and relation of these accidents almost ignored by every author excepting Moreau de Tours,† who has called special attention to it. This jerking (*secousses,*) or sudden instantaneous tetanic contraction of the limbs or body, may occur as the immediate precursor, or as an intermediate accident, or less frequently again, as the substitute of the attacks. Moreau de Tours asserts that he has met with only one instance of the last nature, in a woman at the Salpêtrière, who remained for ten years free from fits, which were replaced by light jerkings of the arm, recurring sometimes so rapidly that she could not count them. In addition to the case here cited, I have observed the jerkings in a boy who has continued four years without fits, but subject to jerkings of the arms, as though they were acted upon by an electric discharge. The phenomenon, exclusively located again in the arms, existed for three years before the fits supervened, in a patient who became epileptic from traumatic injury to the skull, and whom I trephined fourteen years after the infliction of the injury, with complete recovery from the fits. The jerks are repeated several times before the attacks of *grand mal*, in the case of a young man I have been recently attending with my friend Dr. John P. Gray, and who in one of his attacks of mania attempted to kill his

* Homicidal Insanity, *Journal of Mental Science* : Vol. VIII, 1863; p. 332.

† *Union Médicale* : 17 Juin., 1853; p. 553.

mother, firing at her with a revolver. Another, a woman with *grand mal*, became free from it when the catamenia disappeared, and has remained since subject to sudden jerkings of her whole body, occasionally repeated as many as eight or ten times in one hour, causing dizziness and rendering her very fretful, with an unnatural laughter, and very stubborn. Moreau de Tours regards this accident as evidence either of a latent or of a manifest state of epilepsy; and my observation, so far, bears out the assertion, as also that the phenomenon belongs exclusively to epilepsy; for I have never met with it in any other disease. This accident should not be confounded with the local convulsions of some of the limbs that may herald the fit, as a true motor aura, and which have been described by Herpin and other authors. It is chiefly on account of its association with the latent forms of the disease, and the consequent medico-legal aid that its presence may afford for the detection of obscure epilepsy, that my remarks have been prolix on this accident, which I believe distinctly marked in this case of homicidal epileptic insanity, reported by Maudsley, and where it supplanted the epileptic fits.

"A peasant aged twenty-seven, had suffered from his eighth year with epilepsy; but two years ago the character of his disease changed, and instead of epileptic attacks he was seized with an irresistible impulse to commit murder. He felt the approach of his attacks sometimes beforehand, and then begged to be bound in order to prevent a crime. 'When it seizes me, I must kill some one, were it only a child.' Before the attacks he complains of great weariness; he can not sleep, feels depressed, and has slight convulsive movements in his limbs."*

I now come to a matter in which medical science and law are in broad dis-accord, as it subverts the main test of any form of insanity which the law acknowledges; it is the capacity to distinguish good from evil, or right

* *Loco cit.*, p. 334.

from wrong. The state of unconsciousness not immediately connected with visible epileptic fits, the gap during which subjective impressions, consciousness to realize the feelings, and the control of volition are withdrawn from the epileptic, who, like a dreaming man sees, but does not appreciate his outward relations, is one of the most characteristic traits of cerebral epilepsy. Dr. Ray in his classical work on Medical Jurisprudence, after commenting in the most able manner on the interesting points relating to the cases of Fyler, Bethel and Winnemore, remarks that the state of unconsciousness in which these epileptics committed homicide is supported only by their own statements, and under the circumstances should not be implicitly received. "No such condition," says our eminent author, "had been previously observed in Fyler or Bethel, but Winnemore stated that he once rowed about in a boat in the river several hours without being conscious of the facts, having been told of it by those who saw him. The same objection lies against this story. No writer on epilepsy speaks of any such feature of the disease as the kind of unconsciousness alleged to have occurred in these cases."* This is the only distinct allusion I have found in reference to the state of unconsciousness I am about to examine. Notwithstanding his cautious reserve in the passage just quoted, Dr. Ray believes, as he afterwards says, that, "such loss of consciousness is not so very far removed from the psychological impairment ordinarily attributed to epilepsy as to render its occurrence highly improbable."

It may be proper, to form a correct notion on the subject, that before going any further I should establish the two distinct conditions under which this state of unconsciousness may be observed in relation to epilepsy.

1. In contemporaneous occurrence with a real fit, more

* *Medical Jurisprudence of Insanity.* Fifth edition, 1871: p. 486.

ordinarily of the form *petit mal*, either before, or, more frequently, after it: 2. As a condition entirely independent of any visible fit, unless it be giddiness or slight vertigo, then assuming a characteristic phase of cerebral or masked epilepsy, and constituting a true transitory but not instantaneous insanity. The impulsive acts of epilepsy are instantaneous; yet the state of insanity in which they are almost always produced has a transitory duration, varying from hours to several days, in which sense I use the term transitory insanity. I pass to a condensed report of such of these cases of legal interest, and commence by reproducing one, highly typical, and belonging to the first category.

CASE XVII. A young man fell from the top of a ladder fifteen feet high, and became epileptic thereafter. He would, while in conversation, stop suddenly, drop his head and look as if dead, but would regain consciousness in a few seconds, entirely unaware of his condition. One evening, after one of these attacks, he went into the street, took a horse and buggy which he found in front of a house, rode over a mile and a half to his father's grave, pulled the flowers from the bushes planted over it, and brought them home to his mother, whom he invited to take a ride. Being asked where he procured the horse and buggy, he replied that he found them lost in the street. His mother directed him to go forthwith to a livery stable and there leave the horse and wagon that they might be returned to their owner. He started to do so, but left the horse and buggy for keeping at a livery stable, as his own. When discovered by the owner, the transaction was looked upon as a larceny, thereby causing great mortification and annoyance to his family. The boy, however, could never account for his conduct, and completely forgot every circumstance connected with it. On another, more recent occasion,

he left home after the attack, and while wandering through New York, he came across a sailor's agent, who engaged him to go as a sailor on board an English vessel starting for London. The agreement was signed, and after leaving almost all his pay and some of his personal effects, he embarked for England. The captain discovered from the start that he was no sailor, and finding him very flighty, exempted him from going to the top of the masts, and assigned to him very light duties. A few days after his departure, on coming out from his state of epileptic insanity, he expressed great surprise at finding himself on board a vessel bound for London, and completely ignorant how he came to be on board. The mother discovered through the police the departure of her son, and took the necessary steps to have him brought back. He has similar attacks of insanity after nocturnal paroxysms, or fits of *petit mal* as described above, but is very rational and gentle in the intervening periods between the paroxysms, which render him very mischievous, inclined to be constantly running or wandering about, and prone to acts of violence.

CASE XVIII. A young lady, aged 28, has suffered from severe *grand mal* and *petit mal*, from the age of dentition. Her mother and brother are insane. For the last five years the *grand mal* has occurred only at night, about the menstrual period, and at the same time the fits of *petit mal* have increased in severity. The intellectual faculties of this woman, impaired at this time, display at others no change beyond the peculiarities and impulsive traits of character, obvious only to those who watch her closely. After the attacks of *petit mal*, she remains in a most curious state, and talks and argues with an acuteness and loquacity not before natural to her; she re-

lates with great correctness passages from the Bible, or writes the most strange and incoherent letters. While in this condition she is constantly acting as though she were listening to something, and frequently stops in the conversation to assume such attitudes; she also becomes very destructive, often strikes at those who touch her, and does not seem to recognize or remember the names of persons familiar to her, though replying pointedly, and coherently to any of their remarks. This state persists for one or two days before the nocturnal attack after which she feels depressed, with no recollection whatever of what she has done before.

Let me now refer to cases of the second category, which are the most perplexing and those on which I chiefly desire to insist.

CASE XIX. I have had this patient under my care since 1867, and observed him very closely, assisted in the beginning by my learned friend Dr. L. B. Edwards, of Richmond, Va. He is 35 years old, epileptic since puberty, and was at first subject to furious mania lasting about three weeks after the fits of *grand mal*. His condition improved under treatment, and gradually the attacks changed into vertigo, often repeated, accompanied with religious monomania and refusal to speak with any body. After an absence of several months in Nova Scotia, he returned to New York, two years ago, considering himself cured, though acting very queerly at periodical times. No fits had occurred for sixteen months, a longer freedom than had ever been observed before. At this time, he would lose every three weeks the memory of the most trivial circumstances, frequently inquiring for noises that he heard, or obstinately insisting upon going out to wander at a venture for hours, or to visit persons with whom he was not acquainted. On other occasions he would enter a shop and buy articles he did

not want; he was once arrested for assaulting a clerk in a dry goods store, who refused to let him carry away some goods he had selected, unless they were paid for. He has in like manner caused considerable annoyance to his brothers in ordering things and denying on their reception that he had bought them. He acts, throughout these paroxysms in an apparently rational way, answers coherently, but at once forgets what he has said, and repeats twice the same word or question addressed to him. He further displays a slight but evident quivering of the hand and of the facial muscles. This state is followed by several hours of profound sleep, from which he wakes in complete oblivion of what he has done.

CASE XX. A young man, aged 19, with a paternal cousin epileptic, has suffered for six years from *grand mal*, after being sunstruck. For the last year the fits occurred as a sort of vertigo, without other convulsions beyond a slight quivering of the facial muscles, which came on generally in the morning; subsequently, instead of vertigo, he exhibited occasionally for hours, or a whole day, an utter unconsciousness of what he did. His mental power in the mean time was failing and his memory had become very much enfeebled. The first instance of his unconscious state that attracted particular attention, was the following: He left his father's office, where he was employed, to call on a merchant with whom his father traded extensively, and told him that it was of no use to look after the payment of some pending account, and asked in addition, for the closing prices of certain merchandise that he could take them to his father before four o'clock that day. It is needless to remark the great surprise that this conduct caused his father, who looked upon it as an indication of sudden insanity. On another occasion, he started

early in the morning for Mott Haven, where he stopped at his uncle's, who, struck at the strangeness of his acts and manner, brought him back to his father. He was then planning all sorts of mercantile projects. The day after these attacks, he was quite himself, but could not account for, or remember anything of what had occurred to him.

CASE XXI. A gentleman, aged 42, had attacks of *grand mal* from the age of 12 until he was 22, but no fits have occurred since. He, however, has been subject for the last five years, to dizziness and headache, and must also have had some nocturnal attacks, from the statement of a brother, who has heard him breathing very heavily sometimes in the middle of the night. It was impossible to arouse him at once from such a condition. He is very passionate, and has had, at variable intervals, attacks, during which for one or two days he believes himself another man, living in London, where he resided years ago, and acts in the most extravagant manner in regard to his affairs, and is very licentious. He becomes drowsy at the end of these attacks, and after sleeping for twelve or fourteen hours, awakes in a state of confusion, utterly unconscious of his previous actions and conduct.

CASE XXII. A young man, about 20 years of age, brought from the Tombs to the City Asylum, was not able to furnish any account of himself until several hours after his admission. I then ascertained that he lived with his mother, in Hartford, and was subject to epileptic fits, that always had occurred during the night. He could not explain why he started from Hartford, nor what he did before taking the night steamer where he had a fit early in the morning. He arrived at New York quite incoherent and stupid, and was taken in charge by the police. At the asylum this

patient had several attacks of cerebral epilepsy, when he would become very impulsive and dangerous. One morning, after getting up, he assaulted another patient who addressed some remarks to him, and wounded him about the face, with a vase he threw at him. During the fits of cerebral epilepsy, which lasted two or three days, he acted entirely automatically, without preserving afterward the least recollection of what he had done throughout this stage.

These are not the only evidences I could bring forward of this peculiar form or state of unconsciousness which may be displayed by cerebral epilepsy. A signal illustration of it is furnished by the case of Winnemore, as presented by Dr. Ray, and it is no less glaring in the example produced by Dr. John P. Gray, during the trial of Montgomery, and noticed in one of the preceding pages of the JOURNAL. The same condition is strikingly portrayed by Dr. Laurent in his interesting report of the epileptic who murdered Dr. Geoffrey, of Avignon, and may be equally recognized in many of those instances, received with so much wonder and incredulity, of instinctive or impulsive insanity, actually springing out of a mistaken or undetected epileptic affection. In view of these facts, how are we to decide on the legal responsibility of a man criminal by reason of his disease, who acts and talks apparently rationally throughout a state of epileptic or cerebral insanity? Before answering the question, let me bestow particular notice upon a recent exposition of the law, which could not be more pertinent to the point, as laid down by the learned Judge Mullin, of the Supreme Court, in the decision denying reversal of judgment in the case of David Montgomery.

While I am of opinion, said the presiding justice, that, for some days before the killing, the prisoner was partially insane, and at

some times during that time more so than at others, there is no evidence that he was not capable of distinguishing right from wrong at the time between noon on Saturday and the commission of the crime. Indeed, we might go further, and say that at no time except when he was in one of the epileptic fits, is it proved that he was incapable of distinguishing right from wrong. Drs. Gray and Cook give it as their opinion, that the disordered state of mind produced by one of those fits may continue for days, and the person having it be unconscious of what is passing, notwithstanding he may act and talk rationally during the time. If Courts are to act upon this as an established fact, I do not see but that all attempts to punish such persons must be given up. If a man may be utterly insane and yet act and talk rationally, it is impossible by any test to determine where responsibility for crime attaches. We may convict a person altogether incapable of committing crime. I do not make these remarks because I doubt the correctness of the opinion of these learned and intelligent gentlemen, but I say, that while the greatest degree of care and caution must be exercised in determining the question of capacity to commit crime, yet we must hold the man responsible whose acts and declarations prove him to be so far sane as to know that an act that he commits is, by the laws of God and man, wrong. If, under the rule, a person that is irresponsible is punished, it must be submitted to, or entire immunity must be given to persons proving insanity. I am of the opinion that the conviction was right, and should be affirmed. Judgment affirmed.*

It would be hardly relevant to my purpose to enter into the obvious inconsistency and uncertainty of this authoritative statement, which acknowledges the existence of insanity, and admits in the next breath the non-recognition of its manifestations. I will, therefore, confine myself to the reply to the query I have already put, and repeated essentially in Judge Mullin's decision; to wit, is it really impossible by any test to determine the criminal responsibility of such insane epileptics?

It is a recognized principle of psychological medicine, that hallucinations and delusions are not the only exponents of insanity; that, in his intervals of calm and quietness, when not raving, the lunatic may act and talk

*Abbott's Practice Reports; New Series, Vol. XIII., p. 252.

rationally; and, that the cerebral activity is at these moments accomplished by the acquired habit or process of thought, without the mind having a real recognition of its operation,—wherefore these acts are ordinarily not appreciated or remembered. We frequently meet with recovered lunatics who do not retain the least recollection of entreaties and requests they earnestly made, nor of their conversations, in moments, which seemed periods of perfect rationality, through the progress of their past insanity. Curiously enough, they on the contrary are often capable of furnishing a circumstantial account of their feelings and surroundings during the exacerbations of their madness. It further requires no proof, that we rely on the purely mechanical operations of the mind, and on the ordinary agencies that bring them into action, to maintain the discipline and order of our lunatic asylums, without need of punishment, chiefly by endeavoring to restrain the disordered intellect and unbridled impulsive instincts of the insane by a judicious counteracting opposition, wisely rendered unfelt in its enforcement. Then, again, if the instrument should become so materially impaired that the mind's faculty of preference and estimation be suspended, are we to conclude therefore, that lunatics should be held responsible for what they have no power to do, even though appearing to our sane minds as capable of distinguishing right and wrong, as of sacrificing their lives, or that of their fellow beings, to the overwhelming feelings and uncontrollable actions under insanity? Certainly it would not be logical to measure the nature of such morbid actions by the standard of sound feelings. In regard to the unconsciousness of epileptics while thus rationally acting in their paroxysms of cerebral epilepsy, it is far from being an exceptional or unique phenomenon of the kind. Is not the mind in active ope-

ration during somnambulism and consciousness completely obliterated, though the individual nevertheless displays capacity to distinguish right and wrong? And yet, the law entertains no prejudice to exempt from punishment any criminal act perpetrated during somnambulism. In this place, however, I do not attempt to discuss the legitimacy of punishment, to which I take no objection, but simply to ask—why should cerebral epilepsy, which so much resembles somnambulism in its manifestations, be visited with the punishment which the law does not award to the latter?

There are, however, more cogent facts to convince us that the state of cerebral epilepsy, referred to by Drs. Gray and Cook, displays characteristics of its own, which will enable a physician experienced in the phenomena of epilepsy to disclose its existence. In this more than in any other case where the detection of insanity is attempted, the antecedents, as Dumesnil has established it with great propriety, are elements of the utmost importance. The hereditary predisposition, as we may see by the examples here reported, stands prominent in this regard. Truthfully has Maudsley asserted, that, "the hereditary madman often gives the idea of a double being; appeal to his consciousness and he seems rational and nowise deranged, but leave him to his own devices and his unconscious life appears to get the mastery and to impel him to extravagant or violent acts." The periodicity of the attacks is a phenomenon I look upon as constant in cerebral epilepsy. I have met with no case in which I have failed to trace precisely their previous occurrence after close investigation, or to verify their repetition while the patient was under my immediate care. The mental phenomena of masked or cerebral epilepsy recur with the periodicity peculiar to the other epileptic paroxysms. They are

not solitary. They supervene after a more or less prolonged stage of incubation, and, though acknowledging the same source and nature as the other attacks which they substitute, they exhibit, however, a much longer duration, seldom lasting less than a day, and often persisting for two or three. These paroxysms, as already asserted, may equally alternate with those of *petit mal* or *grand mal*, just as these latter may exist combined. Cerebral epilepsy, nevertheless, ordinarily constitutes by itself the epileptic malady, of which it implies an advanced stage. Its supervention is evinced by other signs besides extreme susceptibility and impulsive actions, and it is not rare to find it associated with religious monomania and erotomania. The volubility and instantaneous changes usually attending this state may be sometimes replaced by an opposite condition of complete immobility and silence, the epileptic remaining for hours motionless, with a sullen expression of countenance, and even involuntarily passing his urine or excrements, like those with stupidity or melancholia attonita. I have observed this condition to the extreme of verging almost in catalepsy. Giddiness becomes also a symptom of this state, with more or less profuse perspiration of the head. In three instances epistaxis has supervened during or immediately after the attack, and in clear connection with it. In the majority of cases I have personally observed the existence of hallucinations and delusions of a distressing character which prompted the patients to acts of violence. Hallucinations of hearing have been the most frequently detected; they further appear particularly noticeable in the cases here quoted from Laurent and Gray, as also in many of those recorded by Brierre de Boismont and other authors.

The physiognomy of a patient with cerebral epilepsy bears in a high degree the heavy lost look and unmistakable stamp with which epilepsy brands its victims. The bloated and livid appearance, with the slight quivering of the face, the tremor of the limbs, and the moral perversion that springs out of the malady and leads to shameless vicious habits, or intemperance, account for the frequent arrest, and punishment like drunkards of individuals suffering at the time from cerebral epilepsy. The quick recovery from their fit of unconsciousness, strongly countenances such mistake. I have on many occasions, had under my care, patients supposed to be laboring with delirium tremens, or alcoholic insanity, who after attentive inquiry proved to be inveterate epileptics, arrested in a state of cerebral epilepsy.

Another phenomenon, observed pretty regularly during the paroxysms of masked epilepsy, is a propensity of the patient to repeat one same phrase, and especially the words addressed to him. This echo sign, regarded by Romberg as symptomatic of cerebral softening, appears to me in these instances mainly indicative of a perverted will. I have noticed it with a remarkable constancy, and we see it distinctly recorded in the case of Rœgiers previously cited.

The inception of cerebral epilepsy, when its signs are not well marked, may pass unrecognized by an unexperienced observer; but the transition from the paroxysm to a natural state of mind, so far as my observation goes, is always effected after a period of sleep, that seems required by the brain to recuperate from the shock caused by the malady. This is a point on which I have before insisted when examining into Montgomery's case, and to which may attach a great medico-legal value. This sleep may be prolonged several

hours: I have observed it often accompanied by heavy breathing, or snoring, which makes it easily mistaken for the sleep of drunkenness. The case from Brierre de Boismont, and that of Bisgrove in 1869, who after dashing out the brains of his victim, laid down and went to sleep by him, are striking illustrations of the fact now pointed out, in addition to other instances that might be presented from the reports of other authors.

The state of unconsciousness I have tried to describe belongs properly to that form of intellectual *petit mal* so faithfully delineated by Falret. Indeed, it is actually one of its important phases, left unnoticed by the eminent French alienist, and by referring to the well known description given by Falret, the correctness of this statement may be verified. Nor should the deceitful form of cerebral epilepsy, which I have thus deemed worthy of separate consideration, be confounded with the entire transformation of character, that may result after one single fit, as in the case mentioned by Maudsley, or the special moral and intellectual dispositions which characterize epilepsy. These latter we know to be justly declared by Baillarger, as marks which, without constituting a state of insanity, nevertheless place epileptics beyond the common rule, and if not sufficient to render them unaccountable for all actions, extenuate at least their legal responsibility.

A few more words in conclusion. It is by an attentive study and unbiased appreciation of facts that we arrive at the elucidation of truth, and to no other end are the foregoing cases submitted. I have intentionally avoided entering upon any speculation as to their significance, of which the reader may himself judge. The deepest feelings of humanity and compassion towards epileptics, whose dreadful malady has most

especially attracted my attention for many years, observing them at all hours, and subjecting their cases to a strict analysis, move me to contribute this small portion of my results, feeble though it is, towards clearing away the obscurity that still covers the vital question of their legal responsibility. It will, however, be useless to talk and write about this or any other subject related to criminal insanity, if our energies are not directed to reform the procedure of our courts of law in criminal cases where the plea of insanity is interposed as a defence. Let a preliminary examination of the prisoner be intrusted to competent medical experts, fully to ascertain and accurately to estimate the question of insanity, before he be placed on trial ; and this system once sanctioned by our legislators and put into practice, the prevalent misconception of insanity, and its abuse in contravention of public safety, will be effectually checked, and no occasion left to accuse the law of inhumanity for sending either a homicidal epileptic, or any other reasoning madman to the gallows instead of to the Lunatic Asylum.

PSYCHOLOGICAL RETROSPECT.

ENGLISH PSYCHOLOGICAL LITERATURE.

Journal of Mental Science, Vol. XVII.—January, 1872.

PART I.—Original Articles:—The Hereditary Connections between certain Nervous Diseases: Francis E. Anstie, M. D. Feigned Attempts at Suicide: David Nicholson, M. D. On some Modern Teachings of Insanity: Edgar Sheppard, M. D. Our Overcrowded Lunatic Asylums: S. W. D. Williams, M. D. The Relative Efficacy of Tincture of Hyoscyamus, Bromide of Potassium, and Chloral, in single doses, on Maniacal Excitements: John A. Campbell, M. D. Mental Epidemics among the Lower Animals: W. Lauder Lindsay, M. D. A Medico-Legal Possibility: Frederick Needham, M. D. Case of Ataxic Aphasia and Agraphia, with Locomotor Ataxia; J. Batty Tuke, M. D., and John Fraser, M. B.

After noticing the general fact of the hereditary and constantly interchangeable character of the various neuroses as first given by Morel, Moreau de Tours, and more recently by Maudsley and others, Dr. Anstie devotes his remarks to the two following varieties of the hereditary neuroses, viz.: the Active and the Dormant. Of the cause of the Active Neurosis, alcohol is given the first place, “and I am inclined to believe from my own observation, that alcohol of all depressing agencies, has the most decided power to impress the nervous centers of a progenitor with a neurotic type which will necessarily be transmitted under various forms and with increasing fatality, to his descendants.” The second cause is sexual excess, “though it may well be doubted, if that unaided is capable of implanting the stamp of progressive degeneration upon a race, except, indeed, in the case of masturbation; and even that

tends to personal sterility rather than the begetting of neurotic children. The third is habitual and long continued insufficiency of food—a most potent cause undoubtedly. The fourth, which unhappily is often added to the third, is total vacancy of mind from the want of education. Any one of these causes, with the doubtful exception of the second, however, is probably capable, at any rate in a generation or two, of fatally perverting the organization of the nervous system, and evoking the Active Hereditary Neurosis.

The proof of the existence of the Dormant variety is not so easily given. It is rather an hypothesis than a fact incontrovertibly established, that this is present in some cases, in which the neurotic disposition has at one time been active in the race, but mitigated by favorable circumstances, “and reduced in action to a nullity, the members of the family now exhibiting no evident tendency to nervous disease. The concealed bias to such diseases does still exist and is capable of being called out in any individual of the race, by certain unfortunate influences or conjunctions of influences.” As evidence of the Dormant Neurosis, our author cites cases of dipsomania, in no single instance of which has he failed to find “somewhere among the ancestors, drunkenness and mental eccentricity or downright insanity;” though in one instance the offending member of the race was not found till after a long and a strict search among the ancestors, and then it was a case of simple intemperance. It seems to us that this is putting too fine a point upon hereditary tendency. Were it accepted to this extent, who could hope to escape being an involuntary victim to vice or disease, through the indiscretion of some unfortunate progenitor who lived ever so many generations past? What an opportunity this offers of shifting a personal, individual responsi-

bility upon one's family predecessors, and of thus escaping from the moral and legal accountability of one's acts? Does it not in its very statement virtually deny the operation of favorable circumstances mentioned, as intermarriage with healthier stocks, &c.? Theories are of use in explaining phenomena, but when too finely spun, are little else than sophistry. We believe somewhat in moral depravity and in accepting the results of our father's sins, but carried to the extent advocated by the Doctor, it is Calvinism run to seed.

The inquiry which are the signs of the Dormant Hereditary Neurosis is thus answered. Premature occurrence of puberty in a child, judged by the standard that prevails in the family. The Doctor thinks that cases of unusual sexual precocity are due to the fact "that the stain left in the family organization by some forgotten drunkard or lecher of the race is *not* wiped out." Lastly he treats of the circumstances that especially tend to develop the Dormant Neurosis. These are deficient nutrition in childhood—preponderance of emotion over steady intellectual work in the ordinary brain life of an individual—the occurrence of phthisis more especially; but also of any disease which by involving protracted suppuration, or in any other way exerts a prolonged and steady depressive action on nutrition—unwise intermarriages.

Notwithstanding the forbidding picture which the Doctor has drawn, and which not unnaturally would lead some to look upon our organization as controlled by a hereditary neurotic tendency, as by an inexorable fate, he presents a more cheering prospect if the life of the individual is so cast as entirely to avoid, or gradually to reduce to a minimum such causes as constitute the basis of an Active or Dormant Hereditary Neurosis.

The tendency of some authors of the present day to attribute such a power to hereditary influences as to make it the actual and potential cause of disease, and thus to account for symptoms and conditions which are otherwise recondite in character, is to be deprecated. This tendency slightly overdrawn assumes in itself the form of a latent disease, or "concealed bias" as it is called, which may at any time by a mere explosion in some open act be pleaded in extenuation of crime, and be made a cloak and a covering under which criminals may escape all punishment, and be turned loose to prey upon society.

"The Feigned Attempts at Suicide" are introduced by statements showing the frequency of actual suicides, and doubtful attempts made in prisons. The circumstances or motives under which suicide is feigned in prison, are arranged under three heads. It has relation to some present punishment within the prison; or it is a part of the process of feigned insanity; or the attempt is made in order to effect a diversion. The circumstances as to time and place when attempts at suicide are made are noticed, as also the methods most commonly employed.

Hanging and strangulation are most frequently chosen, as means are always at hand. It is effective in appearance, and also creates an excitement in the cutting down, and efforts at resuscitation. Cutting the throat or other parts of the body, and starvation are resorted to for variety, but they have great disadvantages in the danger of the one and the self torture of the other. Incidents are narrated in which these feigned attempts resulted disastrously, and in some instances it is supposed fatally to the prisoners.

Dr. Sheppard in "Modern Teachings of Insanity," criticizes the address of Dr. Maudsley before the Psycho-

logical Association. Of the remarks of the President upon the management of a predisposition to insanity, he speaks in terms of approval. He detects even in the earliest days of the young life influences for evil, and remarks upon the "stumbling blocks," which parents place in the way of children in giving them names which in the future may weigh them down by their greatness or prove a source of ridicule by an unfortunate association of letters; for instance, the boy Arthur Samuel Smith will be written down and called an *ass* by his playmates, or "the smallest body may he welded with the smallest mind in the personality of a Charles Augustus Plantagenet Smith." They thus begin life at a disadvantage. Though these things may be looked upon as trifles, they do not prove so to certain "temperaments of neuropathic type" and may exert a great influence for evil, upon the child who can not endure to be ridiculed. "To subject a child under even the most favorable circumstances, to the shock and jars of a public school is no trifling experiment. To unite the taunts and gibes of others is a dangerous and unnecessary complication of a process even at the best not remarkable for its simplicity."

The religious belief of a family and its mode of dealing with religious questions "may seriously affect the finite future of its every member."

The practice of self analysis with religious meditation, carried as it sometimes is to an undue extent, is said to result in pusillanimity and feebleness of character. "Mental introversion and self anatomy are fertile causes of insanity." This subject is well illustrated in the context.

Education is considered of paramount importance in the management of those who have any kind of *neurosis*. An education "which does not paralyze the will," or

"ignore the teachings of science or the natural phenomena of the material world."

Of the propriety of forbidding those who inherit epilepsy or insanity to marry, our author acknowledges the futility of legislative interference, though he characterizes such unions as defying the law of nature and morality. If marriage should be interdicted, the ordinary consequences of conjugal union could not be prevented by legal enactment, for unfortunately in such organizations sexual passion overcomes reason, and too often seeks only its own gratification regardless of all consequences. Several of the difficulties attending the decision of the question in individual cases are given.

The remarks of Dr. Maudsley that he has long had a suspicion that mankind is indebted for much of its originality, and for certain special forms of genius to individuals, who themselves directly or indirectly have sprung from families in which there is some predisposition to insanity, are commented on at some length. He gives several quotations as embodying the same or kindred thoughts, first from Aristotle, "*Nullum magnum ingenium sine mixtura dementiae*," again from our own Hawthorne, "The world owes all its onward impulses to men ill at ease," then follows the well-known couplet,

"Great wit to madness nearly is allied
And thin partitions do their bounds divide."

Reference is made to the work of Moreau as elucidating the subject most fully. Dr. Sheppard properly regrets that the number of geniuses is so small in comparison with the number of lunatics, and considers it unfortunate to the tax-payers and unsatisfactory to society in general.

The views advanced by Dr. Maudsley in reference to the Treatment of Insanity in Asylums and Private

Houses are combated with much earnestness and forcible reasoning which reaches the point of an *argumentum ad hominem* in speaking of the charge that lunatics are made in asylums. Dr. Sheppard closes his remarks by observing that Dr. Maudsley's movement seems to be of a retrograde kind, and at variance with the notions of early treatment, which experience has taught us to be so valuable.

In the paper entitled "Our Overcrowded Lunatic Asylums," Dr. Williams after speaking of the failure of the various remedies proposed, of the Scottish plan, or "lay speculation in lunacy," as it has been called, of the "Gheel system," of the fitting up of wards in poor-houses and unions, and of the impropriety of still further enlargement of existing institutions, submits a plan which so far as tried has worked successfully. He has learned from experience that the poor are willing and anxious to have the personal care of their insane relatives, and his plan for partial relief for the overcrowding of our asylums is founded on this knowledge; in accordance therewith he has given up many such cases where he was assured that the friends possessed the requisite ability and fitness to assume the charge. He is much pleased with the practical operation of the system, and thinks it applicable to a large number of cases. The law of New York State has always made provision for the discharge of patients and their transfer to friends who were able to give bonds for their "peaceable behavior, safe custody, and comfortable maintenance," and annually the Utica Institution is relieved of patients by the operation of this legal enactment. It is to be regretted that some provision has not been made by law by which counties might thus provide for certain harmless incurables.

We give the conclusions arrived at by Dr. Campbell in his experiments "On the Relative Efficacy of Tincture of Hyoscyamus, Bromide of Potassium and Chloral, in single doses, on Maniacal Excitement." The experiments were made upon fourteen patients, to whom the remedies were given alternately for forty-six consecutive nights. The doses employed were of the tincture of hyoscyamus, 3 ii; chloral, xxx grs.; bromide, xl grs. The results, though not considered conclusive, are as follows: That both chloral and tincture of hyoscyamus are sure sedatives to maniacal excitement: that of the two, chloral is the most certain sleep producer, and acts more quickly than hyoscyamus: that the bromide, though a sedative, and, to a certain extent, a hypnotic, is not sufficiently powerful to allay intense excitement, or to compel sleep when great insomnia exists: that a two drachm dose of tincture of hyoscyamus is not quite an equivalent to the thirty grains of chloral.

We have used at Utica for a long time, and with great success, as a sedative at night, a combination of tincture of hyoscyamus and chloral, in the proportion 3 ii of the former to xx grs. of the latter. This proves efficient, and as we have seen in no instance any unfavorable effects from its use, we can commend it as a sedative of maniacal excitement and a hypnotic.

Dr. Lauder Lindsey contributes an article additional to those upon the Physiology and Pathology of Mind in Lower Animals, upon "Mental Epidemics among the Lower Animals." His remarks are confined to the form which is popularly known as panic, and technically described as *timoria* or *panophobia*. His illustrations are found in the stampedes of cavalry horses, traceable to alarm or fright, and he instances the Aldershot and the St. Petersburg stampedes. Of those attribu-

table to fear or terror, of domestic or wild animals, during extensive conflagrations, he instances the great fire in Chicago, in 1871, and the prairie or bush fires in Michigan and Wisconsin in 1871. All of these papers we have perused with great interest, and regard them as valuable contributions to knowledge. They also increase our regard and widen the range of our sympathies for the various species of our domestic animals.

"A Medico-Legal Possibility" is the record of a case of injury to an epileptic, by falling while in a fit. The injury produced was a double fracture of a jaw. The case is given as showing the possibility of such an accident, had it not been observed, giving rise to unjust suspicions of violence, and to legal investigations in which unpleasant or disastrous consequences might result to those in charge of the institution and patient.

The case of "Ataxic Aphasia and Agraphia with Locomotor Ataxia," is given by Drs. Tuke and Fraser, because of "the rarity of the combination of so many ataxic forms of disease in one individual, their apparent common cause, the great similarity of each with each, and their possible common pathology." The case as condensed is as follows: Twenty years ago the man had a temporary attack of epilepsy from the use of alcoholic liquors. He continued his intemperate habits, and in January, 1871, had a hemiplegic attack, upon which supervened the "symptoms of six various forms of nervous disease, epilepsy, delirium tremens, hemiplegia, aphasia, locomotor ataxia, and maniacal excitement," all attributed to one common cause. The lesion causing the hemiplegia, was thought to be "of a limited sanguineous nature, as it was unaccompanied by coma, was transitory in its duration, and the loss of power

was not complete. These conditions suggest that the clot was in the left *corpus striatum*."

The patient was discharged after six weeks, as he manifested no mental aberration.

The remainder of the number is taken up with reviews, a retrospect of Italian and French psychological literature, notes and news of the quarter.

PART I.—April, 1872.—*Original Articles* :—The Madmen of the Greek Theatre: J. R. Gasquet M. B. Illustrations of the Influence of the Mind upon the Body in Health and Disease, with special reference to the Imagination: Daniel H. Tuke, M. D. The Temperature in General Paralysis of the Insane: W. Julius Mickle, M. D. Case with a lesion involving Broca's Convolution without Broca's Aphasia: J. Batty Tuke, M. D., and John Fraser, M. B., C. M. The Abolition of Seclusion: T. O. Wood, L. R. C. P. Insanity and Homicide, Occasional Notes of the Quarter.

"The Madmen of the Greek Theatre" by J. R. Gasquet, M. B., is introductory to several articles upon the same subject. In this one he announces his intention of showing how completely the teachings of Aristotle as portrayed by his characters in the Greek drama, accord with the "latest decisions of our science, which we are striving to impress upon a reluctant public." His motive is the hope that studying insanity under the different circumstances of culture, civilization and religion, which then existed in Greece, and to-day exists in England, more light may be cast upon the subject of the causes of insanity, and our present knowledge may be extended, or at least confirmed. The writer is favorably circumstanced to undertake the work, and has made it a labor of love.

The various articles on the "Influence of Mind upon Body," &c., by Dr. Tuke have already appeared in a separate volume, and been noticed in the JOURNAL OF INSANITY.

We present the conclusions given by Dr. W. Julius Mickle in the paper on "The Temperature in General Paralysis of the Insane."

From an analysis of the foregoing and of similar observations, we infer that in the middle and latter stages of general paralysis of the insane:—

1. A rise in temperature often accompanies a maniacal paroxysm.
2. A rise in temperature often precedes and announces the approaching congestive or convulsive seizures, and nearly always accompanies them.
3. When these states are prolonged (congestive or maniacal,) the associated elevation of temperature is usually prolonged also.
4. Defervescence of temperature, after its rise with excitement or with apoplectiform attacks, often precedes the *other* symptoms of toning down to the usual state.
5. Moderate apoplectiform attacks, or moderate maniacal exacerbations, are, however, not invariably associated with increased heat of the body.
6. A transitory rise in temperature may occur without any apparent change in mental or physical state to account for it.
7. The evening temperature is usually higher than the morning temperature in general paralysis, and an absolutely high evening temperature occurs in cases rapidly progressing towards death.
8. A relatively high evening temperature seems to be of evil omen, even when *not absolutely* very high.
9. Rapidly progressing cases may show temperatures above the average both in the morning and evening, for a long time before any complication exists.
10. Gradual exhaustion may pass on to death, in general paralysis, with an average morning temperature normal or nearly so throughout, except when raised temporarily by the special attacks to which general paralytics are subject.
11. The onset, especially, of pulmonary complications, or of hectic from bed-sores, is marked by much heat, and when death is accelerated by the former, the temperature and pulse rule high, often, however, sinking somewhat before death, whilst respiration then becomes very rapid.

Dr. Mickle now of the Derby County Asylum, is a graduate of the University of Toronto, and received from that Institution its highest honor, the gold medal.

The "Case with Lesion Involving Broca's Convolution without Broca's Aphasia" is quite interesting in a pathological view. It is by the accumulations of such cases, well and thoroughly observed, both as to the symptoms during life and post mortem appearances, that the truth or falsity of this ingenious theory is finally to be established or refuted. The case presented the following peculiarities,—a thickness of articulation, resembling that of general paralysis, and a hesitancy when about to name anything, the latter increasing very much some months previous to her death. The history of the case is that of an apoplectic seizure, eleven years before her admission to the asylum. She suddenly fell down and remained unconscious for some weeks; there was, however, no evidence of the existence of paralysis, though she was for a time speechless. From this she recovered, and was for a long period very talkative. During her residence of three years, in the asylum, her condition as regards the power of speech is given above.

The autopsy presented an excavation of the brain substance at the postero-infero-external part of the left frontal lobe. Its outline was irregular; its cavity filled with serum, and narrow white bands sprang from its sides. The dimensions of the cavity were as follows: in its long axis from before backwards, parallel to the fissure of Sylvius, two and one-quarter inches obliquely, vertically, one and three-sixteenths of an inch; in its deepest part it was three-quarters of an inch, but generally only half an inch. The lesion had destroyed posteriorly, the inferior fourth of the ascending parietal convolution, the inferior third of the ascending frontal,

the inferior margin of the second frontal and the *posterior half of the third frontal convolution.*

In the comments upon the case, the views of various authors are presented and a general *résumé* of the subject is given; and the conclusion reached, that it is a "complete testimony to the erroneous nature of Broca's convolution localization." In the July number of the *Journal*, we find a letter from Dr. Wilks, who, in commenting upon this case, considers it as strongly corroborative of the views held by Broca. The claim is made that the very hesitancy of speech and inability to recall the word she wished to use, though she recognized it as pronounced for her, constitutes aphasia, as understood by Broca and his followers.

"Abolition of Seclusion," by T. O. Wood, L. R. C. P.: Edin., &c., &c.: Ever since the time of Conolly our English friends have decried restraint as applied by means of the camisole, muff, wristlets, &c., and have seen, but evil in their use. Synchronous with the laying aside of such appliances, the employment of another mode of restraint in the form of seclusion was adopted, and from the statistics has become frequent and general. In doing this they virtually changed the mode of restraint, and, as some have contended, to the disadvantage of the patient. In the article, Dr. Wood presents his arguments for, and urges the total Abolition of Seclusion. That mechanical restraint, both by means of special appliances and by seclusion, is valuable in individual cases does not admit of doubt, and we know of no reason why the profession abroad should deprive themselves of the advantages of their employment. Such extreme views do not embody the truth, and the "golden mean" is to be found not in the entire abolition or the promiscuous use of any given form of

restraint, but in the enlightened judgment of the physician regarding the treatment of each case presented. To some of the recommendations we cordially assent; the abstaining as much as possible from the employment of sedatives during the day, and only giving medicine as a sleep procurer at bedtime; and also to the taking care to have always a sufficient number of attendants on duty, so that excitable patients may be closely watched. But to remove patients to a separate airing court, to avoid causes of excitement or because of their disturbed condition, is in itself to employ seclusion, which is so strongly reprobated.

The practice of getting all patients except the sick and really feeble out of doors, and allowing them a judicious amount of exercise in the open air, is not only conducive to health, but is a powerful agent in promoting recovery; but physical exhaustion in a strongly maniacal patient is not, as we believe, to be encouraged, but rather avoided.

The editorial upon "Insanity and Homicide" is a capital arraignment of the present system of the trial by jury, when the question of the mental condition of the accused is raised.

Had the wit of man been employed to devise a tribunal more unfitted for such a purpose, it might have exhausted itself in the vain attempt. It is one of the anomalies of British jurisprudence that while in an action for libel or any civil injury a special jury may be claimed, and the services of men who are above the lowest levels of ignorance and prejudice be thus obtained, it is quite otherwise when a person is on trial for his life. In this most momentous issue, however complicated the circumstances, however obscure the facts, he must stand the verdict of twelve common jurymen. In ordinary cases of murder, when the facts are such as any person of average sense and experience may judge of, the system works sufficiently well, or at any rate no great harm ensues; but in any case in which it is necessary to form a judg-

ment upon scientific data, a common jury is assuredly a singularly incompetent tribunal. The very terms of science they are ignorant of, and they either accept the data blindly on the authority of a skilled witness, or reject them blindly from the prejudice of ignorance. The former result is commonly what happens in regard to scientific evidence of poisoning; the latter is commonly what happens in regard to scientific evidence of insanity. There are few persons who, without having had a special chemical training, would venture to give an opinion on the value of the chemical evidence given in a case of poisoning, but everybody thinks himself competent to say when a man is mad; and as the common opinion as to an insane person is that he is either a raging maniac or an idiot, it is no wonder that juries are prone to reject the theory of insanity which is propounded to them by medical men acquainted with its manifold varieties. It would seem to be an elementary principle of justice that a prisoner on trial for his life should have the right to claim a jury of men specially competent, or at any rate not absolutely incompetent, to judge of the facts on which his defence is to be based.

It is an additional evil of the present system that judges too often share the ignorance of juries, and surpass them in the arrogant presumption which springs from ignorance. Instead of urging them to throw off all prejudice, and aiding them with right information, they sometimes strengthen their prejudices by sneers at the medical evidence, and directly mislead them by laying down false doctrines. They may even go so far as to flatter them in the opinion that they, as men of common sense, are quite as well able as medical men to say whether a person is insane or not.

Not only is it the fact that judges are ignorant, but they are too often hostile. Governed by the old and barbarous dictum that knowledge of right and wrong is the proper criterion of responsibility when insanity is alleged, they resent angrily the allegation of insanity in any case in which the person has not lost all knowledge of right and wrong. Believing that medical men are striving to snatch the accused person from their jurisdiction, they are jealous of interference, are eager to secure a conviction, and sometimes lose the impartiality becoming the judge in the zeal proper to the partisan. The reporters are happily good to them, in forbearing to report all they say and do, or we fear that the dignity of the bench would have suffered more in public estimation even than it has done of late years.

It is useless to say smooth things when things are not smooth.

There is a direct conflict between medical knowledge and judge-made law, which must go on until bad law is superseded by just principles in harmony with the teachings of science. For many years, by all authorities on insanity, in season and out of season, the truth has been in vain proclaimed; many times have futile attempts been made to arouse attention to the iniquity of the law as laid down by the judges; but it is still necessary for us to go on protesting, as our forefathers did, and as our children's children may have to do. We may, at any rate, take leave to characterize the administration of the law on every occasion in the plain terms which it deserves. Under the name of justice, grievous injustice has sometimes been done, and it would be easy to point to more than one instance in which murder has been avenged by the judicial murder of an insane and irresponsible person. The saddest and most humiliating disease with which mankind is afflicted, and which should rightly make the sufferer an object of the deepest compassion, only avails in England in the nineteenth century to bring him, in the event of his doing violence, to the edge of the scaffold or over it. To this point have eighteen hundred and seventy-two years of Christianity brought us! And science protests in vain!

The ground which medical men should firmly and consistently take in regard to insanity, is that it is a physical disease; that they alone are competent to decide upon its presence or absence; and that it is quite as absurd for lawyers or the general public to give their opinion on the subject in a doubtful case, as it would be for them to do so in a case of fever. For what can they know of its predisposing and exciting causes, its premonitory symptoms, its occasional sudden accession, its remissions and intermissions, its various phases of depression, excitement, or violence, its different symptoms, and its probable termination? Only by careful observation of the disease can its real character be known, and its symptoms be rightly interpreted: from this firm base medicine should refuse to be moved.

It will not be of much use to point out once more, what has been pointed out over and over again, that the manner in which scientific evidence is procured and taken in courts of justice is very ill-fitted to elicit the truth and to further the ends of justice. One side procures its scientific witness, and the other side procures its scientific witness, each of whom is necessarily, though it may be involuntarily, biased in favor of the side on which he is called to give evidence—biased by his wishes, or interests, or passions, or pretensions. It is not in human nature entirely to escape some

bias under such circumstances. In due course he is called into the witness-box and examined by those who only wish to elicit just as much as will serve their purpose; he is then cross-examined by those whose aim is to elicit something that will serve their purpose; and the end of the matter seldom is "the truth, the whole truth, and nothing but the truth." Having regard to the entire ignorance of scientific matters which counsel, jury, and judge shew, it may be truly said that the present system of taking scientific evidence is as bad as it well can be, and that it completely fails in what should be its object--to elicit truth and to administer justice. "The incompetency of a court as ordinarily constituted, is," as we have formerly said, "practically recognized in a class of cases known as Admiralty cases, where the judge is assisted by assessors of competent skill and knowledge in the technical matters under consideration. Moreover, by the 15th and 16th Vict., c. 80, s. 42, the Court of Chancery, or any judge thereof, is empowered, in such way as he may think fit, to obtain the assistance of accountants, merchants, engineers, actuaries, or other scientific persons, the better to enable such Court or judge to determine any matter at issue in any cause or proceeding, and to act upon the certificate of such persons." The Lords Justices seldom, if ever, decide on a question of insanity without calling for a report upon the case from one of the Medical Visitors in Lunacy. If the English law were not more careful about property than about life, it would long ago have acted upon this principle in criminal trials.

We have quoted somewhat at length because the truth thus pleasantly told regarding the English system applies with equal force to our own. The article concludes with a full report of several cases recently tried, which have excited much interest in this country as well as at home,—that of Rev. John Selby Watson and Christiana Edmunds.

July, 1872.—*Original Articles*:—Tumors of the Brain and their relation to its Mental Functions: T. S. Clouston, M. D. The Madmen of the Greek Theatre: J. R. Gasquet, M. B. Illustrations of the Influence of the Mind upon the Body, &c.,: Daniel H. Tuke, M. D. Notes in the case of Agnes Laing or Paterson, who was tried for murder at Perth, April 23, 1872: J. Batty Tuke, M. D. Homicidal Impulse: Frederick Needham, M. D. On the Misuse of the Term, “Softening of the Brain”: G. Mackenzie Bacon, M. D. Insanity and Homicide. Occasional Notes of the Quarter, &c.

Dr. Clouston in his article “On Tumors of the Brain,” gives the history of six cases which have fallen under his observation out of 214 autopsies, being in the proportion of 28 to 1000. The statistics furnished by several authors on the subject are given, but in none of them were tumors found in so great a percentage of cases. In some of the cases the tumors were single, and in others multiple and varied in size from a large orange to a marble. There were also other pathological changes in the brain substance. In four of the six cases, the tumors were cancerous, one was fibrous and consisted of an increase of the nerve connective tissue, and one was the result of tissue degeneration of the nerve fibres, with calcareous deposition following. “Looking at the six cases, we see at once that the tumors differed very greatly in the different cases, as to their relation to the mental symptoms. In this respect they are so far typical of the disease, for the history of cases of tumors of the brain exhibits a variety of bodily and mental symptoms, as astonishing as it is difficult to explain.” We present the conclusions derived from an analysis of the cases. The subject is to be continued.

1. That irritability and loss of self-control, and a change of disposition, are the first mental symptoms of those tumors of the brain which directly produce morbid psychosis.
2. That the depression present seems to result from the patient’s knowledge of his probable incurability, and is natural therefore.

3. That a blunting of the whole of the mental faculties soon comes on, and gradually passes into coma.

4. That tumors growing slowly at the base of the brain may, by pressure, cause portions of the grey and white substance of the convolutions to pass through small openings in the dura mater, to imbed themselves in the cranium, and so form true herniæ of the brain.

5. That tumors growing in the brain have three distinct effects on the brain structure. 1st, they create an irritation tending to ramollissement in the nerve substance with which they are in contact, from their first appearance. 2d, they cause pressure on distant parts, which in its turn causes an alteration of the structure and nutrition. 3d, they set up *progressive* disease and degeneration of certain parts of the nerve structure, the true nature of which is as yet not very well known, but it seems to be in some way directly connected with the essential nature and constitution of all sorts of nerve substance, whether cells or fibres. Its results pathologically are—an increase of the connective tissue of fatty matter, in the form of granules, and enlargement and thickening of the coats of the blood-vessels, but all these seem to be secondary changes.

6. That there is a distinct and strong analogy between the symptoms, mental and bodily, produced by such large tumors, and those of general paralysis, which is the type of progressive degenerative diseases of the nervous system, inasmuch as it affects the brain, cord, sympathetic ganglia, and retina.

7. That such cases would seem to hold an intermediate place, so far as mental symptoms are concerned, between acute inflammation of the cortical substance and blood poisonings on the one hand, and hereditary insanity on the other, the mental characteristics of the three being represented by delirium, irritability, and delusion respectively.

Orestes is chosen as a subject of the second article of the series "Upon the Madmen of the Greek Theatre." The writer comments upon the scene where Orestes, after the murder of his mother, describes his state to the Chorus, and foretells his approaching madness. Then follows his assertion that he sees the Furies in their dusky robes and with many snakes trimmed in their hair. "You see them not, but I see them full well.

They chase me, and I may not longer stay." This whole scene is considered as indicating the beginning of an acute attack of insanity. In the following play, the Eumenides, the subject is continued; the hero having taken refuge at the shrine of Apollo who directs him to fly to temple of Pallas at Athens. The Furies pursue but find him at the shrine under the protection of the Goddess, and chant their "binding hymn" over him. Apollo and Athene obtain for him a fair trial, and he is acquitted.

When we recall the fact that the Eumenides represent the voice of conscience only, the tragedy is deprived of much of its preternatural character; and we then see in this whole account—making due allowance for the Pantheism of the Greeks in invoking the aid of their Gods—but the indications of an ordinary attack of insanity, and the whole presents itself as an actual occurrence of every day life.

In the "Case of Agnes Laing," as given in detail, three points are discussed at some length. 1. The propriety of the admission of evidence of hereditary predisposition to insanity, which in this instance was not allowed by the Court. 2. The difficulty of determining how much alcoholism may have influenced the commission of the murder; and 3, the great prominence given to the term homicidal insanity by the counsel for defence.

"Homicidal Impulse" by Dr. Needham. Two cases are given in proof of the fact that the impulse to homicide is at times present, without other symptoms of insanity. One of the cases was, by his own admission, a case of melancholia which assumed a chronic form. The other upon which much stress is laid, is somewhat as follows: A young lady of superior education and mental endow-

ments, at the age of 28, suffered from an attack of brain fever followed by considerable mental irritability. She continued her labor as a teacher, and at the age of 43, in a condition of impaired health, was suddenly seized with an impulse, at sight of a razor or knife, to commit suicide or homicide. She struggled against this feeling, and in a few weeks it disappeared, and did not recur for five years. She again became debilitated, and was visited by this fearful desire to murder some one, which rendered her life miserable. She came to the asylum laboring under great mental distress, lest her admission should be refused, and expressed her decided conviction that she had reached the end of her self control and must be cared for at once. She was apparently free from delusion, conversed rationally and cleverly upon general subjects. She was evidently in feeble general health, and her pulse was quick and compressible. She was placed on liberal diet, steel during the day, and a sedative at night when required. This is a full description of one attack: she, however, had a recurrence of the same.

Upon analysis, the case does, as it seems, present other indications of insanity, than the thought of homicide or suicide. Her life was rendered miserable. She was in a state of great mental distress, fearing she might be denied admission to the asylum. She had lost all confidence in her ability to control herself. Normally she was of a lively volatile disposition. She was in feeble health, required a liberal diet, was placed under medical treatment during the day, and at night required a sedative to induce sleep. These are symptoms of an attack of melancholia. Was there a homicidal or suicidal impulse existing? By the very statement, are not the two elements of impulse entirely wanting? It was a false idea long entertained. It was

not a sudden tendency, as the thought was persistent, and rendered her miserable. The tendency was completely controlled and did not then impel to action, and never had done so. The word impulse is an incorrect one to apply to actions, as no person sane or insane, acts unless from reasoning; and if from the rapidity of mental operation, the process of ratiocination is overlooked, it does not for an instant imply its absence. That the character of an act as to being suicidal or homicidal, is decided as he says, by the courage or opportunity of the individual, can hardly apply to all cases of insanity; as experience shows that delusion gives courage to the naturally cowardly, and induces the insane man to seek the opportunity. The character of the delusion decides the character of the act. If delusion extends no further than to the patient himself, a suicidal tendency may be developed. If it includes others in its scope, a homicidal act may be attempted.

“On the Misuse of the Term Brain Softening.” Under this heading Dr. Mackenzie Bacon speaks of the habit among physicians and the public of calling all cases characterized by a certain amount of fatuity or declining intelligence, cases of brain softening, and states the fact that of all received in the asylum with this diagnosis, in not a single instance was this lesion found to exist on post mortem examination. With such an experience, and it is of general occurrence in other institutions, he has reason to plead for a more exact use of the term; for, if it be used so loosely, it ceases to have any clear meaning to ourselves, and is apt to encourage fallacies.

“Insanity and Homicide,” is a report of the trial of Dr. William C. Minor, late Assistant-Surgeon United States Army, for the murder of Merritt, in London. He had

been insane for some years, and at one time an inmate of an asylum in this country. He labored under the delusion that he was being pursued by the Fenians, and influenced by this, committed the homicide as the unfortunate man was going to his work, early in the morning. Full proof of his insanity was furnished by friends, by the police to whom he frequently made complaints in writing of persecutions, and by his conduct while in prison. He was acquitted on the ground of insanity. The occasion is improved to make some interesting comments upon the legal criteria of responsibility, and the danger to the community of permitting at large, persons who have delusions of persecution.

October, 1872.—On the Causes of Insanity, and the means of Checking its Growth: Sir James Coxe, M. D. On the Classification and Prognosis of Idiocy: W. W. Ireland, M. D. The Madmen of the Greek Theatre: J. R. Gasquet, M. B. On the proposed Abolition of Seclusion: F. L. Rogers, M. D. Illustrations of the Influence of the Mind on the Body: Daniel H. Tuke, M. D. Cases in which Mental Derangement appears in patients suffering from Progressive Muscular Atrophy: T. W. McDowall, M. D. An Address on Medical Psychology: Henry Maudsley, M. D.

The Address of Sir James Coxe, Commissioner in Lunacy for Scotland, as President of the Medico-Psychological Association, offers much subject for thought to all engaged in the care of the insane. It deals to a great extent with the statistics of insanity, and tends to correct many false impressions regarding asylums and the scope of their labors. Some of his statements do not impress the reader so favorably with their success in the treatment, or in their influence in reducing the number of the insane; but they bear the stamp of truth, and as such are to be received. We can not give the address in full, though it is worthy of reproduction, but must content ourselves with extracts from his conclusions.

I have stated in the earlier portion of this address that the vast increase of insanity has taken place principally among the lower orders of society, and have shown that the provision of asylums has done nothing whatever to stem the evil. The drift of my observations has been to draw attention to the desirability of entering upon another course, and, instead of waiting till insanity has been produced, and then expending our energies in attempts to cure it, to show the importance of stepping in before mischief has been accomplished. We can not fail to recognize the evils of the present system. We have an ever-growing number of lunatics, and an ever-growing tax upon the resources of the nation for their support. How much better would it be to spend the money which is required for the maintenance of thousands of useless beings, in preserving their health and enabling them to take their share in the labors, duties, and pleasures of life! This is a reform which is not to be wrought in a day, for the sources of the evil lie in the ignorance which pervades every portion of society. The medical profession alone are trained in a knowledge of the structure and functions of the human frame; but even their education is frequently very imperfect, especially as regards the preservation of health. It is in mental hygiene, however, that this deficiency is most apparent.

It is readily admitted, as a general truth, that health is the greatest blessing man can enjoy on this earth, and that without health all else is "stale, flat, and unprofitable." But it seems to be imagined that the wonderfully complex organism of the human body is capable of adapting itself to whatever circumstances it may happen to be placed in, without any intelligent guidance from its owner. We have, it is true, a special class, that of the medical men, whose duty it is to watch over the health of the community and to cure their diseases; but, as a rule, their functions are limited to the restoration of health after it has been lost, and not to its preservation. A small portion of this class, I admit, undertakes the special work of the prevention of disease, and for this end has laid down rules for securing proper drainage and ventilation, for guarding against overcrowding, for limiting the hours of labor, for regulating public-houses, &c.; but our statistics tell us without, as yet, having achieved any perceptible beneficial results. Neither do the Reports of the Registrar-General show any diminution in the rate of mortality, nor do those of the Commissioners in Lunacy show any decrease in the occurrence of insanity. And why should this be so? Simply, I believe, because the community has not

been trained in a knowledge of the human organism, and of the laws which determine its welfare. Ignorance of such knowledge has an all-pervading influence. It affects the proceedings of the Legislature, of the clergy, and of teachers, and, through their instrumentality, the conduct and behavior of the whole community. In the first place, the complex nature of the human mind is overlooked; education is too much restricted to the cultivation of the intellectual faculties, and even their training is as a rule, only partial and imperfect. In the second place, moral training may be said to be almost entirely neglected; and the same remark is applicable to physical training.

The neglect of physical training is almost universal, and even where it is attempted, it is calculated to do perhaps more harm than good. If, instead of the fanciful exercises which, under the name of gymnastics, receive a small share of attention in some schools, a system of modified army drill were introduced, not only would the development of the body be beneficially directed and improved, but useful knowledge in the manipulation of arms would be imparted, and a liking instilled for martial and manly exercises which, in after years, would tend to bring the different classes of society together upon common ground, and would go far to add to our security as a nation.

My doctrine then is, gentlemen, that insanity, so far from being a disease of civilization, is a disease of ignorance, and that the only way in which its extension may be checked is by imparting to every man a knowledge of the structure of his own body, and of the relations in which he stands to the moral and physical world around him. I have already stated my opinion that our special branch of the medical profession has hitherto not fulfilled the utmost good that it is capable of accomplishing. We possess the best means of fully estimating the immense amount of evil that results from neglected bodily and mental training, but our efforts have hitherto been too much restricted to providing a remedy for it by asylum treatment. Of the manner in which this remedy has been applied I can speak only in terms of the highest admiration. In no country in the world does the condition of lunatic asylums surpass—I might, I think, fairly say equal—that of the asylums of the United Kingdom; and the very greatest credit is accordingly due to their superintendents for the intelligence, zeal, and perseverance which they have brought to the fulfillment of their important duties. But I am ambitious to see them exercising their great and legitimate influence in their respective districts, by pointing

out how mind depends on matter, and how insanity is but the expression of a faulty physical constitution, having its origin in causes which we may readily trace, and which are in a great measure under our control. There is much that is hopeful for the progress of the people in the present movement among the working classes for increased wages and shorter hours of labor, but until their sources of enjoyment have been extended by the wider cultivation of their intellectual and moral faculties, there is only too much reason to fear that increase of wages and increase of leisure, instead of promoting their higher civilization, will merely afford the means of increased indulgence to their animal propensities.

“On the Classification and Prognosis of Idiocy.” Dr. Ireland remarks upon the tendency in the classification of insanity, to ignore that founded upon physical conditions, and adopt one based upon the etiology or pathology, and claims that idiocy and imbecility being merely terms to indicate mental deficiency, may with equal propriety be discarded and the classification be formed upon their etiology or pathology. He proposes such a classification, and gives a series of cases, and whenever warranted by their number adds also their prognosis. The paper is an interesting one, and will no doubt prove of value to those engaged in the care and education of idiots.

“The Madmen of the Greek Theatre.” Dr. Gasquet continues the delineations of insanity in Orestes as portrayed by Euripides. The article consists mostly of a translation of the poet, as the writer prefers to place before his readers the text, and leave them to make their own comments.

“On the Proposed Abolition of Seclusion,” by T. L. Rogers, M. D. We have in this a full and complete refutation of Dr. Wood’s recommendation to abolish seclusion. His view of the subject is the correct one,

and is founded on strictly medical principles, and in harmony with the present theory, that insanity is a physical disease. He says:

Indeed, I can not see on what grounds but a purely psychic theory of Insanity, such a practice could have ever found favor.

Let us picture a patient admitted into an asylum in a state of acute mania—the pulse from 100 to 120 or more, temperature over 100°—tongue very probably dry, and all the other symptoms of exhaustion present, which indicate prolonged mental excitement, with most probably absence of sleep, and an insufficient quantity of food for several days previously; let us leave the mental symptoms out of the question for the present, and suppose a physician, called upon to treat such a case, without having ever heard of such a disease as “mania,” and consequently to be guided by the bodily symptoms alone—would anyone in his senses say “the patient wants exercise—walk him out with a nurse?” Would he not rather say, “Whatever the disease may be, the symptoms remarkably resemble those of fever—we will at all events treat him as such, and keep him as quiet as possible, and in bed,” and because the disease is labeled “acute mania,” is he to adopt a diametrically opposite mode of treatment?

Although we have indeed lately heard it laid down as a principle by a very high authority on medicine that “we must indeed treat the disease and not the symptoms,”* I am, nevertheless, fully convinced that the scientific progress of the treatment of cerebro-mental disease has been more retarded by a too close application of this rule than by anything else; that too much attention to the psychic and too little to the physical symptoms have been the main obstacle to a rational system of therapeutics in insanity.

It has been calculated that an increase of temperature of five degrees above the normal standard of the blood is equivalent to the work of lifting the body vertically one mile.

Those who advocate strenuous bodily exercises in acute mania must surely act on the principle of *similia similibus curantur*, but to me it appears more like what is popularly known as “burning the candle at both ends.”

I do not undervalue the beneficial influence of exercise in the treatment of insane patients, which, like employment, has been found to be of the greatest service in the experience of all who have had the care of the insane, in cases in which it has been judiciously employed—that is on the subsidence of the more acute

* See Dr. Wilk's Lecture, *Lancet*, February 18th, 1871.

symptoms; but the more I see of acute mental disease, the more I am convinced of the value of simple rest in bed in the earlier stages, and I have made it a rule in my own practice that every patient on admission shall be kept in bed for the first day at all events.

Even the simple rest gained by lying in bed, together with the maintenance of an equable external temperature, and regular feeding, will often effect a material improvement in a patient's condition, without other treatment.

With patients in a maniacal condition, this keeping in a bed implies keeping them in seclusion, for I am strongly opposed to the practice of keeping patients in bed by the coercion of an attendant or attendants employed to constrain their movements; believing that the physical efforts of patients to oppose this species of restraint, and the mental irritation caused by the constant opposition to their actions, are far more detrimental to their well-being, both physical and mental, than the passive state of seclusion; and to the objection that may be raised, that by keeping a patient in seclusion, you can not ensure his remaining in bed, or clothed, I answer that you can at all events ensure an equable temperature, soft material to surround him, and a limited amount of movement.

To carry out the principle of non-seclusion in its entirety, the use of separate rooms should be abolished by night as well as by day, for to a sleepless patient the long hours of the night are probably even more wearisome than those of the day; but what rest is to be enjoyed by convalescing patients, when those suffering from acute mania are occupying the same room?

It seems to be assumed that mental excitement in acute mania is a given quantity, which must sooner or later be expended, and that if this can be converted into muscular force and expended by trotting patients round an airing court, so much the better; but I am unable to perceive the truth of either of these hypotheses. On the contrary, maniacal excitement appears to me to feed itself, and probably most physicians must have observed (especially in the case of excitable children) the development of great mental excitement—in some cases amounting almost to delirium—from the increased rapidity of the circulation produced by great muscular exertion in play.

It may be said that this is due as much to the exercitation of the mental emotion as to the muscular exercise; but, admitting this, it at least proves that muscular exertion does not allay it. And it will be probably in everyone's experience that great muscular

fatigue induces a condition which is inimical to sleep; and I suspect that in cases of acute mental disease a corresponding ratio might be traced between the muscular treatment and the number of deaths from exhaustion.

Now to employ drugs as a punitive agency I hold to be a prostitution of medicine, and what I may call the vicarious use of narcotics, viz., giving A, who is excited and noisy, but quite incurable, a narcotic because he disturbs B, is almost as bad; and I maintain that where one patient acts in such a manner as to cause discomfort and annoyance to others, it is perfectly legitimate and justifiable to seclude him or her—of course, under medical authority—for it is idle to assume that any attendant, however good he or she may be, will at all times be able to control all patients who may annoy others; and the alternative suggested of sending every violent patient into a separate airing-court, besides requiring in a large asylum an extensive series of airing courts, and favorable weather for their use, and a large staff of attendants, incurs the risk of personal encounters between attendants and patients which it is always desirable to avoid.

I am unable to perceive the injury, either mental or bodily, that a patient can suffer from short periods of seclusion under medical supervision, and I consider the notion of suppressed mental excitement recoiling on the patient himself as altogether apocryphal.

Some time since a sagacious suggestion was made in a medical journal, that with a view to remedy the supposed delinquencies of Asylum Medical Officers, the Superintendents should be selected from the general ranks of the profession, any special experience being held to be a disqualification, rather than otherwise.

Let us imagine a person appointed as Medical Chief to a large Asylum, who had never seen a lunatic professionally, but who had thoroughly posted himself up in the literature of insanity, and relied on his knowledge acquired by reading to direct his practice.

In the first place he would find that mechanical restraint was held (or professedly held) as an accursed thing, and not to be thought of in the modern treatment of insanity. Then he would hear from an eminent authority, that giving narcotics to put "chemical restraint on a brain cell" was almost as heinous, and that if these improved the bodily condition of a patient, they did so at the expense of the mental; by another writer he would find seclusions consigned to the same limbo as restraint; our novice would be earnestly warned to avoid degrading his mission as a physician by having anything to do with architecture, or high

farming : he would be told that hygiene was a thing that anybody could understand, and he would hear from a full chorus that attendants—the agents on whom he would have to rely to carry out his orders—were a degraded class and unworthy of confidence.

It would probably occur to our supposititious Doctor that his strictly medical duties would be rather restricted, and would be limited chiefly to diagnosis, though of pathology he might have his fill ; and if he had not a strong will of his own, he might not inaptly compare himself to the man with the ass in the fable, but that instead of losing his donkey he might be almost tempted to wish that he had gone over the bridge himself and down the stream in place of the quadruped.

The liability to *abuse* of any agent or system forms no adequate ground for its rejection, if its *use* can be proved to be really beneficial ; and if a man has satisfied himself on sufficient evidence that restraint or seclusion, blood-letting or alcohol, narcotics, purgatives, tonics, or any other mode of treatment is beneficial to his patients, I hold that he ought to act according to his own judgment without regard to the *fashion* of treatment prevailing in his days.

“ An Address on Medical Psychology,” by Henry Maudsley, M. D., F. R. C. P., delivered at the opening of the Psychological Section of the British Medical Association.

Prof. Maudsley introduces his subject by showing the great advance made in medical psychology. In doing this he tells us of the enlightened views entertained by the Greeks upon the causation and treatment of insanity, of their gradual obscuration during the dark ages, which resulted in abusive and inhuman treatment of the insane, which, unfortunately and disgracefully to our Christian civilization, was continued to the early part of the present century.

It was when men recognized insanity as a disease which, like other diseases, might be alleviated or cured by medical and moral means—when they regained the standpoint which the ancient Grecians had held—that they began the struggle to free themselves in this matter from the bondage of false theology and mischievous metaphysics. So far as the phenomena of deranged mind

reach, the battle has been won and the victory is complete; no one whose opinion is of any value pretends now that they are anything more than the deranged functions of the supreme nervous centers of the body. But the victory is not yet complete along the whole line of mental function; there is the strongest desire evinced, and the most strenuous efforts are made in many quarters, to exempt from physical researches the highest functions of mind, and particularly the so-called moral sense and the will. The moral sense is, indeed, the stronghold of those who have made strategical movements of retreat from other defensive positions which they have taken up; and it is from this stronghold that what are deemed the most telling arguments against the Darwinian doctrine of physiological evolution have come. Are we, then, as physiologists, to allow an exemption from physical research to any function of mind, however exalted, or shall we maintain through good and through evil report that all its functions, from the lowest to the highest, are equally functions of organization? A vital question for us as medical psychologists, which we must, sooner or later, face boldly, and answer distinctly.

Let us clearly apprehend the problem which we have to consider. Some popular capital has been made, and made in quarters where we might justly have looked for greater sincerity or sounder apprehension, out of the fact that physiology, however far it may advance, can never bridge over the gap between nerve elements and mind, can never leap from the movements of nerve molecules to consciousness. No one has ever said that it could; the problem before us as scientific observers is not to demonstrate the real nature of the force which we designate mental, nor to show how and why certain molecular movements in nerve become, if they do become, sensation or idea, but it is to trace here, as in other departments of nature, uniformities of sequence, to point out that certain sequences are, within our experience, the invariable consequences of certain antecedent conditions. The *how* or the *why* is a mystery which we do not pretend or attempt to explain; we do not even aspire to know it. We can only know the uniformities of sequence as we do the uniformity of sequence which we call gravitation.

With these general remarks, by way of necessary caution, let me come to the particular problem which we have to face—namely, whether there is the same essential connection between moral sense and brain which there is between thought and brain, or between any of our special senses and its special ganglionic center in the

brain? Is conscience a function of organization? I will ask you to look without prejudice at the facts of observation, and to consider if they admit of any other scientific interpretation.

The causes of moral degeneracy are traced in the defective physical and mental organizations of criminals. Crime he claims is at times, the result of an actual neurosis which has close relations with the epileptic and insane neuroses. An hereditary kinship is sometimes traceable between crime and insanity, and the case of Christiana Edmunds is quoted in point. Her father died raving mad in an asylum, her brother died epileptic and idiotic, her sister was insane, her maternal grandfather died paralyzed and childish, a cousin was imbecile, she had been subject to somnambulism in childhood, had suffered from hysteria and finally had an attack of hemiplegia.

Other cases and other arguments are also given, as confirmative of the extraordinary statement "that conscience is a function of organization, the highest and most delicate function of the highest and most complex development of organization."

In the work of helping to trace the path of human evolution through the ages, a great function lies before a scientific psychology; and in investigating in our department thereof the characters of the various neuroses, and the causes, course and varieties of human degeneracy, which seem to be necessary retrograde accompaniments of progress, we medical psychologists have a vast field before us. To rise to a just conception of the scope and dignity of our work will be the best inspiration for entering on it, as is becoming, neither in an abject spirit of superstition nor in an arrogant spirit of conceit. For this we must not forget: that, however clearly we trace the order of events, the mystery of their *why* remains where it was; however clearly we may follow "one first matter" through

"its various forms, and various degrees
Of substance, and in things that live, of life,
* * * * * * *
Till body up to spirit works,"

the power which determines why one tissue should supervene on another, why life should tend upwards, which inspires and guides the everlasting becoming of things, must ever remain past finding out. Man himself, with all his sorrows and sufferings, with all his hopes and aspirations, and his labors wherewith he has labored under the sun, is but a little incident in the inconceivably vast operations of that primal central power which sent the planets on their courses, and holds the lasting orbs of heaven in their just poise and movement.

The number and the volume close with "Occasional Notes of the Quarter," "French Psychological Retrospect," and "Notes and News."

BOOK NOTICES.

Illustrations of the Influence of the Mind upon the Body, in Health and Disease, Designed to Elucidate the Action of the Imagination. By DANIEL HACK TUKE, M. D., M. R. C. P. [Joint author of "The Manual of Psychological Medicine," &c., &c.] Philadelphia: HENRY C. LEA, 1873.

We noticed in the number of the JOURNAL for October, 1872, an edition of this work from another publishing firm, and on this occasion can only speak in terms of equal commendation. The illustrations of the influence of the mind upon the body, scattered through various volumes, have been brought together, and are presented properly classified and arranged. Much has been written upon the subject, but mostly from a metaphysical standpoint, and hence it has not attracted the attention it has deserved. In the number and variety of incidents, it is unsurpassed by anything thus far given to the public; but the great charm to the professional reader is in the clear and simple explanations which are based upon physiological and pathological

principles. The typographical execution leaves nothing to be desired. We hope it may have an extensive circulation.

Contributions to Mental Pathology. By I. RAY, M. D., author of "Medical Jurisprudence of Insanity," and "Mental Hygiene." Boston: LITTLE, BROWN & CO.

It is not necessary to introduce the author of this volume, Dr Isaac Ray, to our readers, to whom he is well known by his numerous and interesting articles published in the JOURNAL OF INSANITY, from its origin to the present time.

The greater portion of the articles are reproduced from the pages of the JOURNAL, but as remarked by Dr. Ray "the subjects they discuss have lost none of their original interest." Dr. Ray has done a great service to the profession and the reading public, in placing these monographs in a durable form, and thus preserving them for further use and reference. Many valuable articles are virtually lost by being published in the different periodicals, where they meet the eye of a limited number of readers, and are not at hand for the ready use of those wishing to consult them. The Doctor has, by this labor, added increased reputation to a name already widely known among psychologists and alienists. We acknowledge our indebtedness for a copy of the work.

SUMMARY.

A commission appointed by Governor Hoffman, to investigate charges against Bloomingdale Asylum in this State, made the following report to his Excellency John A. Dix, by whom it was transmitted to the Senate, on the 17th of February, 1873.

R E P O R T.

To His Excellency John A. Dix, Governor:

SIR.—On August 20th, 1872, his excellency, Governor Hoffman, addressed to the undersigned the following communication :

“STATE OF NEW YORK:

“EXECUTIVE CHAMBER,
“ALBANY, August 20, 1872. {

“GENTLEMEN.—Charges of abuse in the Bloomingdale Lunatic Asylum have lately been made in the public prints, by parties who give their names, and avow their ability to prove their allegations. This asylum is, in common with others of less note, a purely private establishment, subject to no supervision of the public authorities. Our laws permit the confinement of alleged lunatics as well in these private institutions as in the public asylums of the State, upon the order of magistrates of the grade of justice of the peace, issued upon the certificate of any two physicians. This condition of the law giving opportunity for abuses, I have, more than once, asked the Legislature to correct. At the last session, two bills passed the Assembly, furnishing better safeguards in connection with the commitment and care of lunatics; one of these provided (very properly,) that no person or institution should undertake the care of lunatics, except when licensed by the State Commissioners of Charities, and thus subject to their inspection; this bill failed to pass the Senate. It was publicly asserted (and not denied,) that the failure of the bill in the Senate was due, chiefly to the personal efforts at Albany, of the chief physician of the Bloomingdale Asylum. An aversion, thus manifested, to proper supervision of the public authorities, makes it the more important, as well to the repute of the institution itself, as to the public interests, that the charges now made should be investigated.

“I therefore appoint you as a commission for the purpose of investigating these charges, and others that may be laid before you against this or any other asylum for lunatics, whether under public or private management, and of visiting and inspecting the several asylums for the insane, with or without charges being made against them, with a view of discovering abuses wherever they exist, requesting that you report the result of your inquiries to me as soon as possible.

“The duty which I impose upon you is, I know, onerous. At the present time there is no provision of law enabling me to compen-

sate you for your labors or your expenses. I feel warranted, however, in assuring you that the Legislature, at its next session, will not fail to provide a just and liberal compensation.

"Knowing that the people will have the same confidence that I have in your fitness for this very important trust, I make an earnest request that you will, out of regard for the general good, accept the duty.

"Very truly yours,

"JOHN T. HOFFMAN.

"To Hon. Francis C. Barlow, Attorney-General, M. B. Anderson,
LL. D., President Rochester University, Thomas Hun, M. D.,
Albany, N. Y."

In accordance with this request we have visited and examined the Bloomingdale Lunatic Asylum, and several other of the asylums of the State, to wit, the establishments known as Sandford Hall, at Flushing, Brigham Hall, at Canandaigua, the establishment of Dr. Kittredge, at Fishkill, and the State Lunatic Asylum at Utica, and we have heard the statements of those who, after public notice of our meetings, chose to come before us, including those by whom the charges against the Bloomingdale Asylum, mentioned in the letter of Governor Hoffman, were made.

The inquiries made by us have been limited by what we conceived to be the object and motives of our appointment.

Complaints and charges in the public prints had created a fear in the public mind that the several insane asylums of the State were made instruments of oppression, by the incarceration of persons who were not of unsound mind, and stories of abuses in the treatment of patients had excited apprehension in those whose friends were necessarily committed to the care of these institutions.

We conceive that the information of the public on these two points was the object of our appointment.

It would serve no good purpose for us to publish the mass of evidence taken by us, or to go into all the details of our investigations, or to set forth a variety of minor points in regard to which we might feel inclined to criticise the management of these institutions. We could only say in conclusion, what we now say, that, in our opinion, there should be some system of public supervision.

Having early come to the conclusion that the *possibility* of abuses in these institutions, without reference to their actual existence at the present time, is such that some system of supervision

and inspection by the public authorities is desirable, we have not considered it necessary to continue our investigation further than we have above stated; and we therefore submit our general conclusions upon the points indicated, and we unite in recommending the passage of some law providing for a system of visitation and inspection.

First. We are of opinion that there is no just foundation for the apprehension that persons not insane are improperly confined in these institutions.

There will always be some cases in which there may be doubt as to the degree of the unsoundness of mind, and as to the danger to himself and others which would result from the going at large of the patient.

Not being experts on this subject, we obviously could not attempt to pass upon these doubtful cases; but as long as the persons in charge of these institutions are believed to be upright and skillful, the decision of these questions is more properly left to them with their large experience and opportunities of examination.

We would not be understood as intimating that we have doubts as to the propriety of the confinement of any of the persons who came under our observations, for we have not.

Having recommended the passage of a law for a supervision of asylums by persons skilled in the treatment of the insane, we do not feel it to be our duty to do more than express our opinion that these institutions, so far as we have visited them, are not knowingly and designedly made instruments for the incarceration of sane persons.

We do not hesitate to say that, in our opinion, the public anxiety on that point is wholly unfounded.

Second. As to the treatment and discipline of the insane, and the internal management and regulation of asylums, we do not consider it within our province to make any extended criticism of the methods of treatment and discipline pursued, or to point out any improvements which we might think could be made in the details of management.

A proper system of licensing and supervision will result in the laying down such rules and regulations as science and experience shall approve.

We only think it necessary to inform the public whether we find any gross abuses in the treatment of these unfortunate persons.

The great difficulty to be met with in these institutions is to pro-

teet the patients from the harsh and impatient treatment of the attendants. It is very difficult to find persons of kindness, patience and consideration, who are willing to spend their time in the care of the insane; and the difficulty of ascertaining, among the numerous complaints of persons of disordered minds, whether any particular ones are well founded, must be obvious.

Instances of abuse occur in all asylums, and attendants are not unfrequently discharged for that reason.

The utmost vigilance can not entirely prevent it, and all that can be required of the managers of such institutions is an active and vigilant scrutiny into all cases of complaint.

We have no doubt that any such conduct on the part of attendants would be promptly punished in the asylums above named whenever brought to the knowledge of the officers; but it is obvious that such officers do not properly discharge their duty unless they are ever wakeful and vigorous in detecting such abuses, and in maintaining a most thorough supervision over all subordinates.

In regard to the charge made against Bloomingdale Asylum in the public prints, we think that in order to do justice, both to the institution and the public, we may fairly say this: That the gross cases of mismanagement and misconduct charged against it have not been substantiated, and that great injustice has been done to the institution in representing it as the scene of outrages and habitual maltreatment of patients.

At the same time we are compelled to say that some instances of the improper treatment of patients by attendants have been fairly proven before us, and that we do not think that the utmost vigilance in detecting and guarding against this kind of abuse has prevailed in this asylum during the past summer.

Nothing but the sternest discipline, and the most careful watching over attendants, and the most searching and prompt investigations into, and suggestions or suspicions of harsh treatment by them, should be tolerated in an institution of this kind, and we think there has been some laxity in this respect.

It is proper to say that one of the attendants, charged with improper treatment of the patients, had been discharged before our visit to the asylums, and that any relaxation of discipline during the past summer may have been the result of the absence of the superintendent for a considerable period by reason of the illness of himself and his family, and of the illness and death of one of the assistant physicians. We are bound to state the facts as we found them.

We have also visited the insane asylums at Ward's Island and Blackwell's Island, but as controversies were going on between the Commissioners of Charities and Correction and some of their physicians in regard to the management of these asylums, and the subject of the conduct of some of the attendants was then before the courts, it became clear to us that any investigation by those who, like ourselves, had no power of examining witnesses under oath, would be of little value, and we, therefore, did not press the examination.

In regard to the legislation needed to place insane asylums under supervision, we differ among ourselves.

Dr. Anderson is of the opinion that authority should be given to State Board of Public Charities to appoint a superintendent of lunatic Asylums, whose duties and powers should be defined by law, and who shall be associated in the discharge and exercise of those duties and powers with the members of that board.

General Barlow and Dr. Hun believe that such commissioner should be appointed by the Governor and Senate, and that he should be an officer separate and distinct from the Board of State Charities, and they submit a bill herewith creating such officer and defining his powers.

It is, perhaps, not of much consequence who has the appointment of such an officer, but it is the opinion of General Barlow and Dr. Hun that when appointed he should have the powers indicated in the accompanying bill, and that the various asylums should be put under the strict supervision provided for therein.

While differing as to the method of supervision, we all agree that in some way the public authorities should have control over this large class of helpless citizens.

We do this, not because we distrust the management of the various asylums and institutions which we have visited, for we believe that, subject to the criticisms hereinbefore made, they are conducted and managed by skillful and humane men; but because we believe that a proper system of supervision would relieve the public anxiety in relation to these institutions, and at the same time be a protection to the asylums themselves from unjust suspicions and aspersions.

We have found the managers and officers of the several asylums and institutions heartily in favor of some system of public supervision.

Very Respectfully,

FRANCIS C. BARLOW,
M. B. ANDERSON,
THOMAS HUN.

ALBANY, Feb. 13th, 1873.

NOTICES.

—In August last, Dr. William H. Rockwell resigned the Superintendency of the Vermont Asylum for the Insane, in consequence of permanent disability, from fracture of the thigh. Dr. Rockwell has been actively engaged in the specialty for forty-five years. He was for nine years Assistant Physician to the Retreat for the Insane, at Hartford, Conn., and since 1836, has been in charge of the Vermont Asylum. His place was temporarily filled by his son, Dr. William H. Rockwell, Jr., who did not see fit to continue in the position so long and well filled by his father. This is in striking contrast to experience abroad, where, as in the case of the York Retreat, the Drs. Tuke, father and son, have for many years filled the position of Superintendent.

Dr. Joseph Draper, formerly an Assistant Physician in the Vermont Asylum, and more recently in the New Jersey State Asylum, has been appointed to fill the vacancy. Dr. Draper enters upon his duties with the advantage of a long hospital experience, which gives an assurance of future success. While we rejoice in the elevation of the younger men of the specialty, we can but regret the loss of the older who have devoted themselves so long and faithfully to the work of caring for the insane.

—Dr. W. S. Chipley, formerly Superintendent of the Eastern Lunatic Asylum, of Kentucky, has been reappointed to that position, in place of Dr. John Whitney, whose time of service has expired. This announcement will give great pleasure to all the members of the spec-

ialty to whom the Doctor is so well and favorably known by his former successful labors. His address is Lexington, Ky., and not Louisville, as given in the last issue of the JOURNAL OF INSANITY.

—From a letter recently received from Dr. W. P. Jones, late Superintendent of the Tennessee Hospital for the Insane, and now a member of the Senate, we learn that a bill has recently passed both houses of the Legislature, which provides for two other institutions for the insane, one in the eastern, and the other in the western division of the State. It is a pleasure to know that Tennessee has taken position with the foremost States of the Union in regard to ample provision for the insane, and this step we believe is due to the representations of our *confrere* Dr. Jones.

—The following changes have occurred in the staff of officers of the State Asylum, at Utica. Dr. Daniel H. Kitchen has been promoted to be second Assistant Physician, vice Dr. Walter Kempster, appointed Superintendent of the Northern Wisconsin Hospital for the Insane. Dr. William S. Whitwell, has been appointed third Assistant Physician to fill the vacancy. Dr. Whitwell's experience in the Charity Hospital of New York, renders him especially qualified for his new field of labor.

—The twenty-seventh meeting of the Association of Medical Superintendents of American Institutions for the Insane, will be held at the "Eutaw House," in the city of Baltimore, Maryland, commencing at 10 o'clock, A. M., of May 27th, 1873.

Attention is specially called to the following resolutions:

"RESOLVED, That the Secretary, when giving notice of the time and place of the next meeting, be requested to urge on members the importance of prompt attendance at the organization, and of remaining with the Association till the close of its sessions."

"RESOLVED, As the sense of this Association, that the traveling and all necessary expenses of the Superintendents in attending its meetings, ought to be paid by the Institutions which they represent."

By a standing resolution of the Association, the Trustees of the different Institutions for the Insane, are invited to attend the meeting.

Where an Institution is represented by an Assistant Physician, a letter stating that fact should be sent with that officer.

Very Respectfully,

JOHN CURWEN, Secretary.

HARRISBURG, March 6, 1873.

Names and Address of the Members of the Association
of Medical Superintendents of American Institutions
for the Insane.

HENRY M. HARLOW, M. D., Hospital for the Insane, Augusta, Maine.	ABRAM MARVIN SHEW, M. D., General Hospital for the Insane, Middletown, Conn.
J. P. BANCROFT, M. D., Asylum for the Insane, Concord, N. H.	JAMES H. DENNEY, M. D., Retreat for the Insane, Hartford, Conn.
JOSEPH DRAPER, M. D., Asylum for the Insane, Brattleboro, Vermont.	HENRY W. BUELL, M. D., WM. PORTER, M. D., Spring Hill Institution, Litchfield, Conn.
GEORGE F. JELLY, M. D., McLean Asylum for the Insane, Somerville, Mass.	JOHN P. GRAY, M. D., State Lunatic Asylum, Utica, N. Y.
CLEMENT A. WALKER, M. D., Lunatic Hospital, Boston, Mass.	J. M. CLEAVELAND, M. D., Hudson River Hosp. for the Insane, Poughkeepsie, N. Y.
W. W. GODDING, M. D., Lunatic Hospital, Taunton, Mass.	JOHN B. CHAPIN, M. D., Willard Asylum for the Insane, Willard, N. Y.
B. D. EASTMAN, M. D., Lunatic Hospital, Worcester, Mass.	JAMES W. WILKIE, M. D., State Lunatic Asylum for Insane Criminals, Auburn, N. Y.
PLINY EARLE, M. D., Lunatic Hospital, Northampton, Mass.	EDWARD R. CHAPIN, M. D., King's County Lunatic Asylum, Flatbush, N. Y.
JOHN W. SAWYER, M. D., Butler Hospital for the Insane, Providence, R. I.	

R. L. PARSONS, M. D., City Lunatic Asylum, New York.	D. B. CONRAD, M. D., Central Lunatic Asylum, Richmond, Va.
D. TILDEN BROWN, M. D., Bloomingdale Asylum, Manhattanville, N. Y.	FRANCIS T. STRIBLING, M. D., Western Lunatic Asylum, Staunton, Va.
JAMES C. HALLOCK, M. D., Ward's Island Emigrant Hospital for the Insane, New York.	T. B. CAMDEN, M. D., West Virginia Hosp. for the Insane, Weston, West Va.
THEO. H. KELLOGG, M. D., Ward's Island Lunatic Asylum, New York.	EUGENE GRISSOM, M. D., Asylum for the Insane, Raleigh, N. C.
J. D. LOMAX, M. D., Marshall Infirmary, Troy, N. Y.	J. F. ENSOR, M. D., Asylum for the Insane, Columbia, S. C.
J. W. BARSTOW, M. D., Sanford Hall, Flushing, N. Y.	THOS. F. GREEN, M. D., Lunatic Asylum, Milledgeville, Ga.
GEORGE COOK, M. D., Brigham Hall, Canandaigua, N. Y.	P. BRYCE, M. D., Hospital for the Insane, Tuscaloosa, Ala.
GEO. C. S. CHOATE, M. D., New York.	WM. M. COMPTON, M. D., Lunatic Asylum, Jackson, Miss.
H. A. BUTTOLPH, M. D., State Lunatic Asylum, Trenton, N. J.	PRESTON POND, M. D., Lunatic Asylum, Jackson, La.
THOMAS S. KIRKBRIDE, M. D., Penn'a Hospital for the Insane, Philadelphia, Pa.	G. F. WEISSELBERG, M. D., Hospital for the Insane, Austin, Texas.
JOSHUA H. WORTHINGTON, M. D., Friend's Asylum for the Insane, Frankford, Philadelphia, Pa.	J. H. CALLENDER, M. D., Hospital for the Insane, Nashville, Tenn.
D. D. RICHARDSON, M. D., Department for the Insane, Almshouse, Philadelphia, Pa.	JAMES RODMAN, M. D., Western Lunatic Asylum, Hopkinsville, Ky.
R. A. GIVEN, M. D., Woodbrook Retreat, Kellyville, Delaware Co., Pa.	WILLIAM S. CHIPLEY, M. D., Eastern Lunatic Asylum, Lexington, Ky.
JOHN CURWEN, M. D., Penn'a State Lunatic Hospital, Harrisburg, Pa.	JOSEPH T. WEBB, M. D., Longview Asylum, Cincinnati, Ohio.
S. S. SCHULTZ, M. D., Hospital for the Insane, Danville, Pa.	S. J. F. MILLER, M. D., Southern Ohio Lunatic Asylum, Dayton, Ohio.
JOSEPH A. REED, M. D., Western Penn'a Hosp. for the Insane. Dixmont, Alleghany Co., Pa.	RICHARD GUNDY, M. D., Lunatic Asylum, Athens, Ohio.
WM. H. STOKES, M. D., Mt. Hope Institution for the Insane, Baltimore, Md.	WM. L. PECK, M. D., Central Ohio Lunatic Asylum, Columbus, Ohio.
WM. F. STEUART, M. D., Maryland Hospital, Baltimore Md.	J. M. LEWIS, M. D., Northern Ohio Lunatic Asylum, Newburgh, Ohio.
CHARLES H. NICHOLS, M. D., Gov. Hospital for the Insane, Washington, D. C.	E. H. VAN DEUSEN, M. D., Asylum for the Insane, Kalamazoo, Mich.
D. R. BROWER, M. D., Eastern Lunatic Asylum, Williamsburg, Va.	ORPHEUS EVERTS, M. D., Hospital for the Insane, Indianapolis, Ind.

H. F. CARRIEL, M. D., Hospital for the Insane, Jacksonville, Ill.	G. A. SHURTLEFF, M. D., Asylum for the Insane, Stockton, Cal.
EDWIN A. KILBOURNE, M. D., Hospital for the Insane, Elgin, Ill.	J. C. HAWTHORNE, M. D., Lunatic Asylum, Portland, Oregon.
R. J. PATTERSON, M. D., Bellevue Place, Batavia, Ill.	STACY HEMENWAY, M. D., Territorial Insane Asylum, Steilacoom, Wash. Ter.
A. S. McDILL, M. D., Hospital for the Insane, Madison, Wis.	H. H. STABB, M. D., Lunatic Asylum, St. John's, Newfoundland.
WALTER KEMPSTER, M. D., Northern Wisconsin Hospital for Insane, Oshkosh, Wis.	—MACKESON, M. D., Lunatic Asylum, Charlottetown, Prince Edward's Island.
MARK RANNEY, M. D., Hospital for the Insane, Mt. Pleasant, Iowa.	JAMES R. DEWOLF, M. D., Hospital for the Insane, Halifax, Nova Scotia.
ALBERT REYNOLDS, M. D., Hospital for the Insane, Independence, Iowa.	JAMES WADDELL, M. D., Provincial Lunatic Asylum, St. John's, New Brunswick.
CYRUS K. BARTLETT, M. D., Hospital for the Insane, St. Peters, Minn.	J. E. I. LANDRY, M. D., J. E. ROY, M. D., Lunatic Asylum, Quebec, Canada.
WILLIAM B. HAZARD, M. D., County Lunatic Asylum, St. Louis, Mo.	JOHN R. DICKSON, M. D., Lunatic Asylum, Kingston, Ontario.
T. R. H. SMITH, M. D., Missouri State Asylum, Fulton, Mo.	JOSEPH WORKMAN, M. D., Asylum for the Insane, Toronto, Ontario.
J. K. BAUDUY, M. D., St. Vincent's Asylum for the Insane. St. Louis, Mo.	HENRY LANDOR, M. D., Asylum for the Insane, London Ontario.
L. W. JACOBS, M. D., Lunatic Asylum, Osawatomie, Kansas.	JOHN ARDAGH, M. D., Branch Asylum, Orillia, Ontario.

JOHN E. TYLER, M. D., Boston, Mass.
EDWARD JARVIS, M. D., Dorchester, Mass.
MERRICK BEMIS, M. D., Worcester, Mass.
JOHN S. BUTLER, M. D., Hartford, Conn.
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ANDREW McFARLAND, M. D., Jacksonville, Ill.
CHARLES H. HUGHES, M. D., St. Louis, Mo.
WILLIAM H. ROCKWELL, M. D., Brattleboro, Vt.
C. E. VAN ANDEN, M. D., Auburn, N. Y.

M. G. ECHEVERRIA, M. D., New York.
HENRY REIDEL, M. D., New York.
CHAS. W. STEVENS, M. D., St. Louis, Mo.
L. A. BURGESS, M. D., Jackson, La.
T. A. HOWARD, M. D., St. Louis, Mo.
O. M. LANGDON, M. D., Cincinnati, Ohio.
JOHN W. WHITNEY, M. D., Lexington, Ky.
C. P. LEE, M. D.,
C. O. GAUSE, M. D., Osawatomie, Kansas.





